ATTACHMENT C

Employer Survey

The Center for Competitive and Workforce Development at Duquesne University undertook a survey of energy companies in Southwestern Pennsylvania and West Virginia. Energy companies were defined in an encompassing manner. They included not only those sectors traditionally defined as belonging to the industry, but the entire <u>chain</u> of industry suppliers. As a result, companies were added to the list whose main line of business is in manufacturing, services, real estate, finance and even government (because of the regulatory framework governing energy-related activities). The list of North American Industrial Classification System (NAICS) codes defining the survey field can be found at "NAICS_Energy_FinalList.doc".

CCWD sent questionnaires to the entire population of firms and organizations under these NAICS codes – a total of 5,354 entities surveyed. Firms were also given the option of submitting their replies online. As a last step, phone calls were made to increase the response rate. In total, 195 completed the questionnaire – a response rate of 3.6%.

Given the small size of the response and the well-known difficulties of generalizing to a very heterogeneous population of firms, we used the survey only as a source of insight. No attempt was made to make statements applicable to the entire energy industry. These insights are intended to complement the findings of the supply and demand investigation.

Findings

Companies reported 214 vacancies. Six occupational groups accounted for 71% of these vacancies:

- Electricians and Electric Line Workers (23.4%)
- Engineers (18.7%)
- Plant and Systems Operators/General Operations (10.3%)
- General Laborers (7%)
- Welders (6.1%)
- Assemblers and Fabricators (5.1%)

The occupation that took the longest to be filled – and presumably the one where employees are the hardest to find – was that of Engineer. The minimum time given as needed to hire Engineers was 12 weeks, and the maximum was 52 weeks.

Despite the importance of the aging of the workforce, growth remains a significant reason for job openings. Respondents attributed slightly over one half of the reported vacancies to company growth (50.5%), while 41.6% were attributed to retirements.

Companies overwhelmingly chose in-house training as the way to prepare people for jobs. We counted 92 different pairs of companies and vacancies (i.e., if a firm has three types of vacancies, like Engineers, Electricians and General Laborers, it accounts for three pairs). Of these, 70 were reported to require on-the-job training versus 6 that called for training by an educational institution. (Note, however, that companies clearly distinguish between training and education. The former is short-term and job-specific, while the latter deals with imparting basic competencies and skills. Firms do not appear to see themselves as providers of education.)

Fifty six (56) of the 92 company-vacancy pairs demanded prior specific experience with a similar or somewhat similar job. However, firms varied significantly in their requirements (i.e., one would be willing to consider someone without prior experience while a second would not for essentially the same position). Also, firms appeared more open to hire entry-level employees for hard-to-fill vacancies. (For instance, one company reported advertising a $60,000 Engineering opening for which no prior experience was required.)

The survey documented an abundance of relatively well-paid jobs that did not call for a four-year college degree: Electric Line Workers ($18/hour), Diesel Technicians ($21/hour), Petroleum Pump System Operators and Refinery Operators ($12 to $15/hour), Power Plant Operators ($21/hour), Installation and Maintenance Workers ($21/hour), and others.

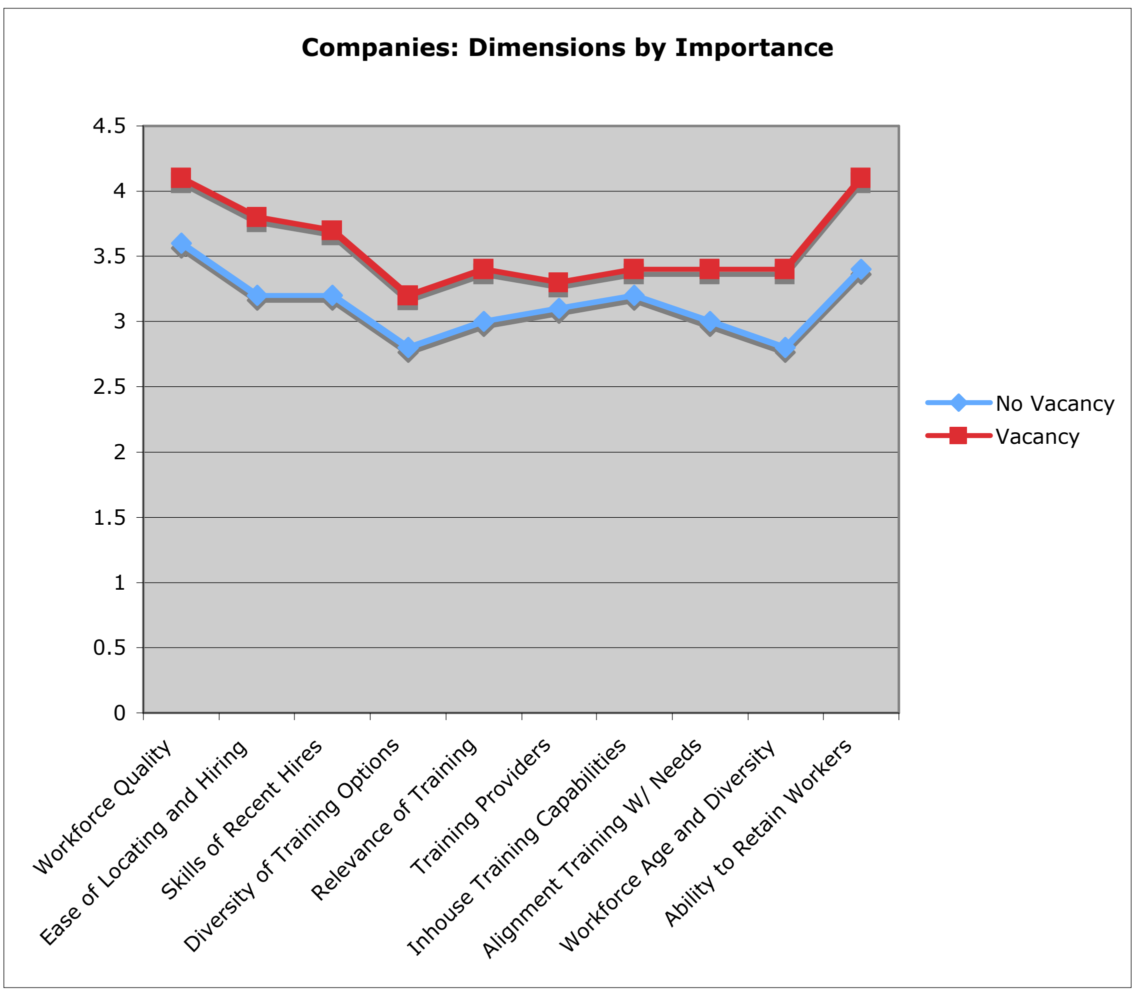
Some of the most interesting findings related to differences between companies that had vacancies (45) versus companies that did not (98). Companies with vacancies were larger than those not hiring – 17 of 95, or 37.8%, had over 50 employees. By contrast, only 7 of those with no job openings (7.1%) had more than 50 people working for them. Given the well-known relationship between size and complexity, hiring firms would appear to be more complex and differentiated.

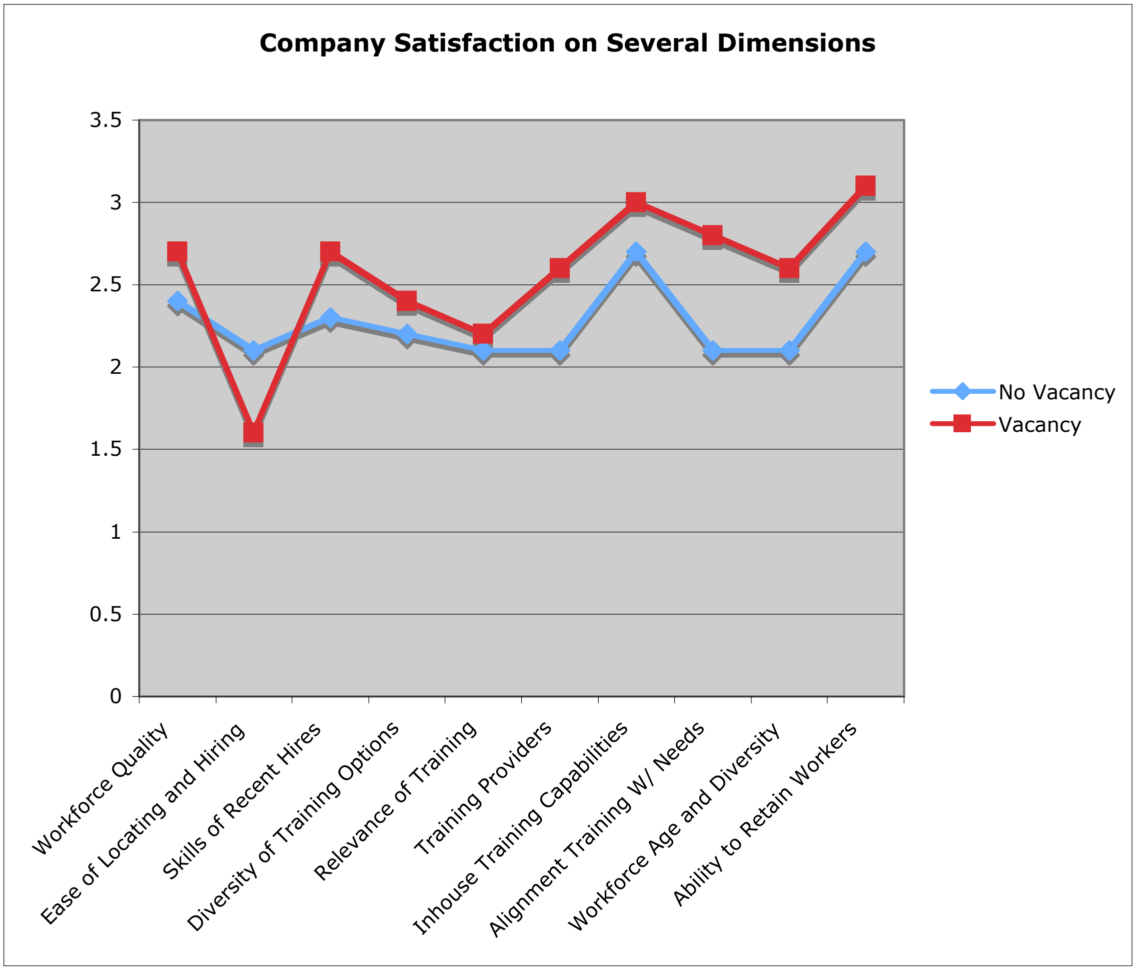
Regarding industry mix, the most notable difference was the greater prevalence of manufacturers among companies hiring -- 28.8% of the latter were manufacturers belonging to the energy supply chain. Only 13% among firms with no openings were manufacturers.

When asked about which workforce areas presented the greatest challenge in terms of recruitment, firms hiring and not hiring agreed on three occupational groups as being hard to find – skilled tradesmen, Engineers and technicians. They differed significantly, however, in how often they picked two of these groups: companies with vacancies were far more likely to see the skilled trades as a challenge (44.4% vs. 26.5%), as well as Engineers (37.8% vs. 17.3%). Once again, we are left with the impression that companies looking for people are more technically sophisticated and complex than the ones that are not. This impression of greater organizational complexity on the part of hiring firms is reinforced by the other big difference between them and those firms not searching for workers. The former did not regard securing unskilled labor as a problem (only 2 of 45, or 1%, mentioned unskilled personnel as an issue). By contrast, 21.4% (21) of firms with no openings considered unskilled labor a challenge.

Not surprisingly, companies looking for people had older workforces (33% over 55) than those not doing so (22% over 55).

The survey asked respondents to rate several dimensions describing their perceptions of the current characteristics of the workforce and of the training environment. The scale ranged from 1 to 5. Respondents were asked to focus on the arena that they considered as their greatest challenge (as reported above, companies picked skilled trades, Engineering and so on as their most difficult challenge). For that arena, they were asked to make a judgment on how important the chosen issue was for the future of their firms, and how satisfied they were with the measures taken by themselves or others (such as training providers) to address the issue. A rating of 5 would indicate the highest possible importance, or maximum satisfaction. The graphs below present the pattern of responses broken down by firms hiring versus firms not hiring.





The pattern of responses displayed in the two graphs is revealing. Companies with vacancies were consistently more satisfied than those with no vacancies in every dimension, and considered the dimensions more important. The only exception to this generalization had to with "ease of locating and hiring" needed workers. Predictably, firms looking to hire considered this as more of an issue (and were therefore less satisfied) than those that were not.

It is interesting to speculate about the possible meanings of this finding, i.e., that the firms that considered workforce procurement and training as less important were also the ones most dissatisfied. One conceivable interpretation is that we are dealing with a self-fulfilling prophecy: because the matter is of little relevance to these firms, nothing is done about it; because nothing is done, company officials know little about it (i.e., about the recruitment and training resources available), and rush to negative judgments ("nothing is being done about the problem"). A second interpretation is more inclusive and compatible with the first. It was suggested earlier that companies not hiring are smaller and less complex; they certainly show less demand for Engineers and skilled workers. It is possible that these same companies have given up on growth and investment, which would explain both their smaller size and the absence of demand for labor. Understandably, workforce topics become less important, and knowledge about training and recruitment is lacking among managers.

Another significant feature of the graphs is the gap between the importance and satisfaction scores for firms with vacancies. Note that companies with openings score all importance dimensions above the scale's mid-point (2.5). There's no numeric value below 3 (in the "importance" graph) and two ratings are above 4 (for workforce quality and ability to retain workers). In short, these companies are serious about workforce matters. By contrast, their satisfaction scores are considerably lower. The two highest rating refer to internal resources – in-house training capabilities (3), and ability to retain workers (slightly above 3). Every other rating, precisely the scores that relate to external factors such as schools and the training system, hovers around the mid-point (2.5). It is apparent that the most aggressive and entrepreneurial firms, those seeking growth and an environment that will support it, are also highly critical of the performance of the educational and training systems. In their view, this performance is perhaps best characterized as mediocre.

In response to the question "What are you doing to ensure a worker supply?" companies offered a variety of comments. Although we have not systematically classified them, the answers fall into two basic categories: hopelessness, "nothing can be done" , compared to active measures to address the problem: "we are outsourcing", "we established a recruitment office in the Czech Republic", "we are providing good pay and benefits". It is a reasonable guess that the latter kind of comment has been offered by the firms actively hiring, which we also suggested are those most entrepreneurial and growth-oriented.

Conclusion

The survey appears to indicate the existence of a segment of companies that, although small, have reached a certain size (several have more than 50 employees) and complexity. These companies are seeking business and appear to be a leading component of the energy industry's expansion. They are looking primarily for skilled people – tradesmen, Engineers, and highly qualified technicians, and need and want help from the public sector (especially from the educational and training systems). However, they appear less than satisfied with the performance of this sector, which they find incapable of providing them with the number and quality of employees they need to grow.