

Report to the Southeast Texas Work Force Solutions -----

The Path Forward

1. Introduction

The following report captures the details of extensive discussions of two focus group sessions conducted at the Industry Safety Training Council (ISTC) in Nederland on July 20th and 27th, 2017. The report has two sections. The first section reports on the essential findings from the two focus groups. This section, entitled “The Anticipated Skills Shortage”, summarizes the underlying reasons for the existing shortage of skilled workers for the petro-chemical industry and the various obstacles facing employers as they set out to recruit and keep qualified workers. The second section offers a plan for addressing this problem. This section is entitled “A Blueprint for the Future.” This plan has two different components and necessarily has to address a large range of challenging issues.

The two focus group sessions were conducted at the Industry Safety Training Council (ISTC) in Nederland on July 20th and 27th, 2017. The first focus group consisted of participants from nested construction contractors who are involved in expansion or turnaround activities at the major petro-chemical plants in Southeast Texas. The second focus group had employees from the petro-chemical companies itself. Although both focus group sessions were conducted separately, there was broad based agreement on a range of issues.

The two focus groups were informed at the outset by Mr. John Durkay, the general counsel of the Industry of Southeast Texas (ISET), about the importance of a free and open exchange of ideas related to the future workforce needs of the petro-chemical industry in Southeast Texas. Participants were informed that there would be no taped recordings of conversation. Instead, two student assistants would keep written records of the conversation among focus group members. Participants were also informed that no portion of any conversation would be attributed to any individual. The two student assistants were then invited into the room. There were identification tags from “A” to “L” that were placed before each participant. The focus groups were conducted by Dr. Kabir C. Sen (Lamar University) with assistance from Mr. John Durkay (Industry of Southeast Texas), Mr. Dennis Isaacs (Golden Triangle Business Roundtable) and Ms. Lauren Van Gerven (Southeast Texas Workforce Solutions). The reported findings from the focus group discussions are primarily based on the notes taken by the two student assistants. The organizational aspects of both focus groups were planned to elicit a frank and open exchange of ideas from participants. This goal was largely achieved.

2. The Anticipated Skills Shortage

There was broad consensus across both focus groups that the petro-chemical industry is likely to face a growing shortfall of qualified labor in the region. This appears to follow current national trends for skilled jobs, as

reported by the Georgetown University Center on Education and the Workforce (Weber, *Wall Street Journal* July 26, 2017). The WSJ article suggests that there is a healthy job market for US workers without four-year college degrees.

While the USA is expected to increase its petroleum production in the future (Clemente, 2016), the managers of daily operations as well as construction activities at these plants expressed frustration over the difficulty of getting qualified skilled labor to work in the plants. The categories of jobs include riggers, laboratory technicians, etc. Several factors have contributed to the current shortfall. These are:

a) The average rise in the stock market over the last few years, has prompted experienced workers to take advantage of the increased worth of their pension/IRA accounts and retire. In many instances, this has led to a shortfall in experienced workers, with a paucity of existing bench strength to compensate for the loss in human resources.

b) The trend over the last two decades in the USA has been to move away from apprentice programs that taught “hands-on” skills to high school students. Many of these previous generation of students then opted for jobs that demanded these particular skills. Instead, the current focus has been on college degrees which require relatively no “hands-on” skills.

c) The average high school student is not aware that some skilled jobs, particularly in the petro-chemical sector, offer attractive salaries, without the additional load of high debts from college tuition, etc.

d) The popularity of online classes available over the internet from major colleges and universities has led to a neglect of “hands-on” education and experience, essential for critical jobs in the industry.

e) Younger talent within the industry have sometimes opted for “certification” programs which enables them to entry level jobs in the petro-chemical sector. However, some of these younger workers, armed with certificates, opt to hop from job to job for better compensation packages, etc. This strategy has unfortunately not given these individuals the requisite length of work experience which would have imparted the nuanced knowledge essential for careers within the sector. Thus, the theoretical knowledge from certification exams has to be complemented by practical work experience acquired over time.

f) The petro-chemical sector has acquired a notoriety over the last few decades as a “dirty” industry that has made it unattractive for new entrants. The general public is probably not aware of the improvements in working conditions within this sector.

g) Over the last several decades, the petro-chemical industry has gone through boom and bust cycles which has not contributed to job stability within the sector. While, the petro-chemical industry is geared for major future expansion in the region, the general public might not be aware of the associated positive changes in job security.

h) Focus group participants were critical about the decline in professionalism and work ethic among new entrants into the workforce. Newly designed training programs should attempt to address this problem.

i) In addition to the difficulty in attracting suitably trained skilled applicants for entry level jobs, the industry also feels restricted by laws related to background checks in recruitment of experienced skilled personnel. Sometimes, suitable applicants are turned away because of a “red flag” in their background. While these checks are mandatory, some focus group participants from the contractors segment felt that the industry should probably re-evaluate and fine tune the level of stringency which is currently in place.

Given the major points from the two focus groups that have been summarized above, it is apparent that the ISET must take the lead in improving the existing low levels of supply of skilled workers for the major industry in the area. In this regard, as a note of caution, it is appropriate to read the opinion expressed in a recent *Beaumont Enterprise* editorial (August 6, 2017). The editorial warns about the area’s over-reliance on the petroleum industry. Notwithstanding this warning, the area appears to be following national trends in the lack of the availability of skilled labor. Thus, ISET should draw up a plan to address the problem. The initial steps that should be taken for doing this are outlined in the next section.

3. A Blueprint for the Future

The problems dealing with the “skills shortage” within the sector can be separated into one that needs immediate attention from one that needs planning to create a better pool of applicants in the future. Each type of problem has to be dealt with in radically different ways.

Based on point i) described above, it is likely that some qualified applicants are perhaps being turned away because of background checks, etc. Thus, an important question is whether the pool of qualified applicants could be widened without any detrimental effects arising from legal and safety concerns, etc. If this could be done, there will be an immediate positive impact on the availability of talent. Thus, as a first step, a sub-committee should be formed. This sub-committee should be given the task of re-evaluating the rules and regulations governing the hiring of workers in the petro-chemical sector. Ideally, the sub-committee will consist of legal and human resource specialists, with addition of selected participants. The sub-committee should report back to the ISET if current rules and regulations governing hiring practices needs to be changed. This step will to some extent address the immediate problem related to expanding the applicant pool.

For improving the pool of future applicants, one has to focus on the next generation of workers that need to be trained. This generation is currently in high school. Here, there is a “demand” problem arising from the general lack of interest in the prospect for opting for “skilled” jobs among existing high school

students. However, the ISET and similar organizations in the areas should first tackle the second type of problem. This is the “supply” problem which encompasses the lack of quality training programs that produce skilled workers for the region. While there was no explicit criticism of existing training programs, there was also no overwhelming praise for any one of them either. One participant commended the efforts his company has made in conjunction with local high schools. This effort must be expanded on a broader scale as a goal which the ISET must try to achieve. A good starting point would be to form a second sub-committee. This group would ideally consist of experienced personnel in the sector (similar, to the background of the two focus group participants). This sub-committee will be given the task of drawing up a list of the types of jobs that are likely to face the most critical shortages in the future. This list (called the ‘jobs’ list) must be complemented by another list. This list (called the ‘skills’ list) will include the basic skills which are expected from a qualified entrant for each type of job. The skills list can include some existing certification qualifications but must embrace some rudimentary practical skills which are essential for each position.

Once this sub-committee forms comprehensive ‘jobs’ and ‘skills’ lists, an inventory of the sources that can supply the training for these skills should be carried out. These are likely to be technical colleges (both public and privately owned). The work of these two sub-committees will be the core for a future blueprint.

Here, some decisions must be made at the outset. For example, should the initial group of petro-chemical industry representatives include members from other regions of the state? Also, how wide should the radius of technical colleges who can provide the requisite training have to be? One approach might be to start off within the confines of Southeast Texas and then expand the ISET's efforts after more experience is acquired by the two sub committees. Once the second sub-committees' task is complete, a one to two day seminar should be organized in Southeast Texas. Here, representatives of selected technical colleges can be invited to hear the required inventory of training programs that needs to be offered.

Planned training programs will include elements of existing materials from certification exams coupled with the ability to operate relevant plant and machinery. The education could be both classroom and lab based, complemented by possible internships in selected companies. Ideally, ISET should be involved in working with the colleges to draw up a plan so that each planned technical program is not under or over supplied in the future. This can only happen if the technical colleges (the suppliers of the training programs) and the petro-chemical sector (the consumer of the output from the training programs) are both on the same page. This can be facilitated through regular meetings involving all parties. This in a nutshell is the blueprint to tackle the "supply" problem.

Once the allocation of future training programs among technical colleges is under way, ISET should set out to tackle the “demand” problem. Here, the goal would be to increase the interest in well-paying skilled jobs, which according to the Georgetown University is a national concern. The ISET should work with select colleges in planning visits to high schools in the region and adjoining areas to inform students about the advantages of a skilled job in the petro-chemical sector. Similar visits should be made to community groups and placement offices for ex-military personnel. Every effort should be made to make the recruitment effort as broad as possible to attract qualified applicants from a wide range of backgrounds. An introductory video presenting the different jobs in a positive light could accompany most of these visits.

In order to evaluate the overall success of ISET programs in improving both the quality and the volume of applicants, some measurement criteria or metrics must be put in place. Once the program is in place, the sub-committee given the task of creating the “jobs” and “skills” list should be asked to create a dashboard containing the metrics for measuring the success or failure of the training programs. Some of these measures could evaluate if applications for critical positions increase in the future and whether new applicants succeed in their initial years in the job. Annual goals based on these metrics should be the yardsticks of success of the overall program.

Thus, the overall plan for the future contains four separate goals that the ISET might strive to achieve over time. A summary of the salient features of these four goals are shown below:

4. Goal One (Expand the Supply Pool)

Many if not all the participants from the construction sector involved in the petro-chemical industry felt that existing criterion related to background checks, etc., were much too stringent and were barring some qualified applicants from applying for skilled jobs. A sub-committee should be set up to evaluate this problem and devise a possible solution. Ideally, the sub-committee should consist of personnel with similar backgrounds to focus group participants, with additional experts from the legal and human resources professions. If no workable solution exists, the sub-committee's findings might provide inputs for industry representatives to use for future actions or rectifications at a higher level.

5. Goal Two (Compiling a Grid for "Jobs" and "Skills" Lists)

Although focus group participants were not explicitly critical of the training provided by existing technical colleges, there appears to be a need for creating a comprehensive inventory of a "jobs" and "skills" list. The jobs list should include the jobs critical to the petro-chemical sector and the skills list

should have detailed qualifications for each job. Here, a sub-committee should be given the task of developing a grid that encompasses critical jobs as well as essential skill sets for these jobs. The task of this sub-committee will be long drawn and difficult as the final result should be comprehensive as well as attentive to the nuanced details for each job.

6. Goal Three (Compiling a List of Select Technical Colleges)

Once the sub-committee entrusted with the task of compiling the “jobs” and “skills” grid is close to completing it, another sub-committee should have access to its results. This second sub-committee should start compiling a list of area and state technical colleges who have the facilities and staff to provide the training for the skills required for the critical jobs. In some cases, there might be an over-supply of training for certain jobs, while other types of training might be in short supply. This sub-committee should be entrusted with the task of working with select technical colleges who have the infrastructure and staff to provide the requisite training for specific jobs. A skills based test for each job should be compiled and college training programs might be judged based on these tests. The primary goal of this sub-committee is to make the petro-chemical industry and technical colleges work together to achieve the goal of having a healthy demand-supply balance for skilled jobs within the sector.

7. Goal Four (Promoting the Training Programs to Interested Parties)

Once training programs designed to provide job specific skills are set up, the ISET should devise a task force which will work in partnership with selected technical colleges to set up recruitment teams to visit local high schools, various community groups and other interested parties. These teams will have the task to effectively inform students near graduation about the advantages of entering these colleges to acquire the required skills. Ideally, the ISET could help produce a recruitment video to complement these efforts.

8. Conclusion

ISET'S main task is to organize the knowledge base within the sector so that a blueprint could be designed for improving the pool of applicants for the petro-chemical sector within the region. Although it is likely that existing efforts are already being made to achieve all four goals described above, a formal organization of the above processes will keep the ISET and its partners focused on the important details involved in creating a base of a skilled workforce for the petro-chemical sector. An ancillary benefit will be to encourage dialogue between the technical colleges and the petro-chemical industry on a regular basis. This will help all interested parties stay informed about the sector's needs for jobs and associated skills. In sum, the ultimate super-goal is to create a steady flow of skilled workforce, available at

internationally competitive rates for the future. This could be a lengthy process, but the positive interactions among the focus group representatives suggest that there is a large bank of committed personnel within the industry who are prepared to work on future programs that can alleviate the anticipated shortage of skilled personnel.

Prof. Kabir C. Sen

Beaumont, TX 77710

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