

Independent Research conducted by
Ronda Sauget, D.Mgt, MBA - Webster University
Marv Finkelstein, Ph.D. - Southern Illinois University at Edwardsville (SIUE)

BUSINESS CASE 1: PRAIRIE STATE GENERATING COMPANY (PSGC) POWER PLANT

The Prairie State Energy Campus (PSEC), a technologically advanced electric generation facility, is one of the largest completed construction projects in Illinois history, and is the largest coal-fired power plant to be built in the United States since 1982.

Located about fifty miles southeast of St. Louis, in Washington County, Illinois, the PSEC is comprised of two 800 MW supercritical units and an on-site underground coal mine, with approximately 200 million tons of recoverable coal; estimated to fuel the power plant for thirty years. The facility generates 1,600 MWs of power, with 95 percent of the output dedicated to eight Midwestern-based non-profit utilities. Prairie State's owners, six public power entities, two rural electric cooperatives and Peabody Energy, invested more than \$1 billion in emissions control equipment, placing PSGC among the top 10 cleanest plants in the nation. Prairie State is a stand-alone energy facility, producing base-load electricity for 180 Midwestern communities, across eight different states, serving 2.5 million families.

Prairie State had its visionary start in the early 2000s, followed by a historic groundbreaking in 2007, and has been producing power on behalf of its owners since 2012. At its construction peak, more than 4,000 skilled union working professionals were employed and 24MM total craft man-hours were logged to complete the power plant construction project, equal to more than \$1 billion dollars in craft wages. Specifically, more than 60,000 tons of structural steel, 15,000 tons of rebar, 165,000 cubic yards of concrete, 129 miles of pipe, and 1,200 miles of cable were used in the construction



of Prairie State's power plant. The Prairie State Energy Campus has also become an important landmark of the southern Illinois landscape, with its power plant stack standing at 700 feet tall—70 feet taller than the St. Louis Gateway Arch.

Since its inception, Prairie State has hired more than 250 local vendors, spending \$80 million in Washington County, Illinois alone, with an estimated economic impact on the region equal to more than \$785 million annually. Currently, more than 600 industry experts from communities across southern Illinois and the St. Louis metro east area are employed at Prairie State. An economic impact study from the University of Illinois predicts that Prairie State will stimulate the creation of more than 800 additional jobs in the region.

The successful completion of the PSEC power plant project is due, in part, to the unique tripartite partnership, between owners, contractors and union labor supported by a strong pre-construction

planning process, a mutually agreed National Labor Agreement and the successful implementation and execution of Project Labor Agreements (PLAs) with the SWIBTC. **Michael P. Rother**, Corporate Director of Industrial Relations and Security for the PSEC, and a central participant in the project's construction from the beginning as PSGC's Manager of Contracts and Industrial Relations, further explains the tripartite arrangement with Bechtel Power Corporation, our primary EPC contractor, and union labor represented by the Southwestern Illinois Building and Construction Trades Council (SWIBTC):

"We needed the certainty of outcome to meet the stringent budget and schedule constraints of our challenging \$4 plus billion dollar project and that certainty drew us to the selection of Bechtel and the union working professionals who represented the Southwestern Illinois Building and Construction Trades. To date, over five years later, our selection of the union craft has proven to be, without a doubt, a complete success story and every craft worker involved should be proud to have their footprint of success on our historic and celebrated project."

To understand the framework undertaken at Prairie State, it is critical to understand what the tripartite model is. Tripartite is used to define a trilateral or three-way approach to organizing a construction project by first agreeing on the terms of working together collaboratively clearly stated in PLAs. The "lateral" part of the term indicates a move from vertical, hierarchical relationships to more team-based horizontal ones. The hallmark of such agreements is a high level of cooperation and collaboration among the three parties, especially labor and management. The concept includes planning, teamwork, implementation and execution of mutual project goals and objectives. There is recognition that the tripartite model promotes

increased communication and coordination central to the way things get done right. Such arrangements have been shown to improve quality, safety, productivity and on-time cost savings, particularly on large complex projects with the required pride and professionalism of the working professional, but most of all, it insures trust and open lines of communications between all



tripartite partners and at the end of the day, it is a mutual success story for all parties involved. In order to best meet the remaining challenging schedule deadlines, PSGC worked closely with Bechtel's project management team to best facilitate the highest levels of labor management cooperation and communication. With this, signatory unions of the SWIBTC responded with their own programs; reinforcing the tripartite model. For example, the United Association of Plumbers and Pipefitters (UA), under the leadership of UA General President Bill Hite, in partnership with Bechtel Power Corporation, initiated its Standard of Excellence program which, according to Rother, "We placed emphasis on organizational effectiveness, commitment, accountability and most of

all leadership. All of these attributes were necessary in order to meet the remaining project milestones, and the implementation of these standards of excellence programs ultimately drove the success of our project to final completion.”

Bechtel worked very closely with the SWIBTC members in getting the working professionals engaged in the decision making process with regard to safety, quality control and meeting schedule deadlines—the end result was a tripartite success. Rother said, “You could see the growing pride in what we were doing here. The union working professionals had a sense of ownership, wore PSGC hats and tee shirts implying, ‘we were part of this historic project and proud of it.’ The tripartite group knew the essential goal was to ‘get the work done right the first time, on time and on budget but most importantly, in a safe and productive manner.” Rother referred to the many achieved major project milestones to underline a key safety high point: “With all craft workers empowered by Bechtel and Prairie State to implement, and consistently drive towards a ‘zero- accident performance’ goal, the tripartite team succeeded in achieving 5.3MM safe hours without a lost time incident at the peak of our project.”

Also, to help accomplish the task of meeting the demand of qualified welders and tackle the large number of critical and specialized welds on the project, Bechtel and the United Association implemented a 16 week welding school as well as installed on-site UA training facilities particularly to meet quality standards on complex welding. Per Rother, “The UA Welders performed at the top of their game, by making over 35,000 pipe welds with a less than 2% weld reject rate. This extremely low reject rate on the critical welds x-rayed is a remarkable achievement.” Dale Stewart, Executive Secretary of the SWILBT Council, also commented, “We are

extremely proud of how well our welding trades preformed on this project. Pre-planning and working collaboratively is the key to having a successful construction project. Our monthly tripartite ‘job-in-progress’ meetings provided the communication opportunity to solve any project issues that may have arose. “

The Boilermakers also rose to the highest level of perfection by making 70,000 welds to build and erect Prairie State’s high capacity boilers. As a result, another major milestone for the project was achieved: 35, 000 welds made on each Unit by the Boilermaker welders without a single leak following Boiler Hydro’s. Per Rother, “It was the Boilermakers commitment to excellence and their “do it right the first time attitude” that allowed the Boilermaker welders to achieve this awesome quality performance on Unit 1 & 2 Boiler Hydro’swith 70,000 field welds made and no “Field Weld” Leaks. This outstanding performance and the fact that the overall Boilermaker welder low rejection rate for the project was 1.15%, is simply remarkable, and a true testament of the skills and character of the Boilermaker craft.”

Similarly, the International Brotherhood of Electricians (IBEW) instituted its Code of Excellence emphasizing the importance of teamwork, mutual respect, partnership, accountability and personal responsibility. Similar to the UA Standard of Excellence initiative, the IBEW President Ed Hill emphasized that, “we are applying for the job and we won’t let you down. ”Concurrently, the International Union of Insulators successfully executed their Professional Craftsman Code of Conduct.

Bechtel and the International Union of Ironworkers rose to the occasion at the early stages of the project using the Ironworkers Standards of Excellence initiatives, by successfully installing over 30,000 tons of Boiler steel

in a safe, productive and timely manner, thus allowing all other crafts to get into the Boiler Structures to execute their scopes of work.

“*The Prairie State Energy Campus power plant project was truly a tripartite triumph.*”

- Michael P. Rother

The tripartite model is a dramatic change from years past, when negative perceptions of labor management relations existed in southwestern Illinois. There were misconceptions, miscommunication and distrust surrounding many construction sites.

Subsequently, to demonstrate the strength of the tripartite, early in the construction of the Power Plant, PSGC site management agreed to take a key part of the infrastructure scope of work outside the PSGC power plant, called the CCW Unloader Project at the Jordan Grove site, and awarded this important project to a union contractor and the SWIBTC. This was decided due to the many union success stories achieved at the Power Plant. The Unloader Project was a critical endeavor for PSGC which planned to handle millions of tons of residual ash collected from the Unit boilers and scrubbers. However, given the strong relationship between key players like PSGC's Michael P. Rother and SWIBTC's Dale Stewart, a PLA was also implemented and signed to perform the Unloader project as a union project with direct oversight by PSGC.

As it turned out, the Unloader project was considered a crucial “test case” for the execution of more PLA agreements and it passed that test with flying colors, as the Unloader Project was a tripartite success story. The contractor and the union trades not only

embraced their Standard of Excellence programs, but a true tripartite partnership attitude spilled into this historic PLA as well. Eventually, these positive labor-management initiatives spread to other work within the PSEC allowing other projects to be done in the form of PLA's.

Success can build onto success if attitudes remain positive and the benefits of labor management cooperation can be recognized.

The Prairie State Energy Campus demonstrates what can be done when labor and management collaborate and communicate effectively. The results can be seen in the time and cost savings, and the quality and the outstanding levels of safety achieved in this immense project. It is a tribute to the men and women union working professionals who came together to build a plant that will serve its member-owners for decades to come.

Michael P. Rother summed up the significance of the Prairie State case in this way: ‘The Prairie State Energy Campus power plant project was truly a tripartite triumph’.