



How a PG&E Diverse Supplier Introduced Affordability, Innovation and Sustainability in One Project

By Tiffany Rodriguez

Pacific Gas and Electric Company (PG&E) has a straightforward, yet challenging mission: to safely and reliably deliver affordable and clean energy to its Northern and Central California customers and communities every day, while building the energy infrastructure of the future.

To fulfill this mission, PG&E relies on the important work performed by its 20,000-plus employees as well as its hundreds of diverse suppliers who reflect California's diversity.

In 2016, PG&E identified a need to replace concrete foundations at some of its substations. A cross-functional group of PG&E team members—including **Trish Fabris, Glenn Hughes, Gelberg Rodriguez, Anna Salinero, and Steven Spicher**—partnered to methodically develop an innovative and scalable solution that was affordable, diverse and environmentally sustainable.

Their efforts were recently recognized with a PG&E Supply Chain Responsibility Award for successfully incorporating supplier diversity and environmental sustainability.

The process started when the team implemented a system-wide effort to assess the condition of all concrete foundations in more than 900 substations. Then, the team evaluated different options for concrete repairs. This is where **Alternative Structural Technologies, Inc. (AST)**



Glenn Evans



Johnathan Evans

came in and added value.

PG&E has worked with AST, a Hispanic American-owned small business located in Northern California, for more than 20 years. AST began in 1988 as a concrete repair consulting firm, serving the structural engineering community. Following a natural progression into becoming a self-performing specialty contractor, AST incorporated in 1992.

This extension of services provided AST with a solid technical background, and an understanding of the unique engineering processes inherent to successful high-performance concrete repair and restoration solutions.

AST specializes in restoring and repairing structural concrete (including dams, spillways, water conveyance canals, tunnels, power house and sub-station installations), with an emphasis on heavy civil structures, including those listed on the National Historic Register of Historic Places. In 2017, work performed by AST at PG&E's Pit 1 Hydroelectric Project Historic District was nominated for the Governor's Award of Historic Restoration of the Year.

Shortly after discovering substation foundation issues, AST provided PG&E team members with a product demonstration that repaired concrete in place by using glass

fiber wrapping and epoxy injections. Spicher immediately saw an opportunity to try something innovative and advocated for AST's solution. This introduction led to a pilot project with AST to repair substation concrete footers that were completed at the end of 2017.

There are no other known foundation programs like this within

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the utility industry. The old process involved building a concrete collar around the existing foundation to confine materials. The new process achieved similar or better results while reducing the environmental impacts and overall project costs.

AST completed 13 repairs during the pilot project, which reduced work by more than 50 hours and resulted in thousands of dollars of cost savings. In addition, the new method avoided the pouring of more than 300 cubic feet of concrete, equivalent to nearly 55 bathtubs full of concrete.

In most cases before beginning work on a PG&E project, AST works closely with their engineers to develop repair methods that will meet the demanding and unique requirements of the utility client. This partnering effort leads to a multitude of efficiencies in reaching the affordability and sustainability goals that are important in today's business environment.

In addition, safety is the absolute prime consideration governing any project. AST prides itself in maintain-



PG&E Supply Chain Responsibility Award Winners. Pictured left to right are: **Gun Shim**, VP, Supply Chain Management; **Karen Austin**, SVP and CIO; **Glenn Hughes**, senior engineering technician; **Trish Fabris**, manager, Project Controls and Resource Management; **Anna Salinero**, design engineer; **Steven Spicher**, senior civil engineer; **Gelberg Rodríguez**, construction supervisor; **Pat Hogan**, SVP, Electric Operations.

ing a high level of continuous training and certification of its employees in strict accordance with PG&E's comprehensive safety directives.

AST, with 18 employees, works to bring innovative solutions that benefit the triple bottom line: people, planet, and profit.

"AST believes it's extremely important that small firms recognize and embrace the combined responsi-

bilities of safety, sustainability and affordability, all while striving to bring consistent value to its clients and employees," said company president **Glenn Evans**, who has two generations of his family working in the company.

There's no doubt leadership, communication and innovation are the key components to AST's continued growth and success. ◆