Background
Westinghouse subsidiaries PCI Energy Services, LLC and Carolina Energy Solutions, LLC are collaborating with Tranter to upgrade plant technology to shell and plate feedwater heaters (SPFWHs). Westinghouse installation subsidiaries have been an integral part of the development team’s new product development projects, providing key insight on constructability and serviceability. The collaboration helps customers avoid any problems associated with buying the installation and equipment in separate packages, finalizing the process in a single, complete installation package.

Westinghouse provides an integrated approach and has a long-standing, successful history of project management, engineering, removal and the installation of major plant equipment that it applies to the installation of SPFWHs.

Description
Westinghouse is capable of providing complete SPFWH project services, including engineering and design through removal and installation. Westinghouse has the expertise and technology needed to meet or exceed all code, regulatory, design, management and installation requirements.

Full Scope replacement services:
- Project management
- Pre-replacement metrology to verify component dimensions
- Laser scanning for three-dimensional modeling
- Civil/structural design engineering
- Electrical design engineering
- Subcontractor management
- Mechanical and piping design engineering
- Support services
- Design change packages
- Direct craft-labor management

Typical shell and plate feedwater heater
**Technology**

Westinghouse offers a full complement of manual and orbital machine welding processes, including gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), flux core arc welding (FCAW) and shielded metal arc welding (SMAW). Westinghouse can perform most welding projects using in-house procedures that cover the majority of welding processes typically used for the installation of new components or the repair of existing systems.

Westinghouse welding technicians are fully certified according to American Society of Mechanical Engineers Section IX standards. Certification is kept current at all times through a computerized library of welding procedure specifications and procedure qualification records. Westinghouse can quickly and easily match qualified welders to the special requirements of any job.

**Project Management**

Each project is reviewed for the best possible replacement methodology to be implemented. Westinghouse utilizes internal best-practice programs, including Project Excellence, a global project management improvement program that includes many of the recommendations of the Project Management Institute (www.pmi.org), in order to drive consistency and professionalism in project execution. Westinghouse’s robust Project Management process incorporates tools that optimize its field execution, including challenge reviews, observation recordings, operational experience reviews and lessons learned, all as standard procedures.

**Benefits**

Seamless project execution, communication with the vendor and complete insight to the design and equipment specifications provides predictable performance of installation activities. Westinghouse’s integrated team is able to coordinate all engineering and field activities to provide the optimal solution for each individual customer.

**Experience**

Westinghouse has expert knowledge and experience in design, repair, installation, fabrication and project management in the power industry.

For more information on Design and Hardware Services for SPFWH, refer to NS-ES-0260.