



# Utilities Tech Outlook

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Pennsylvania Transformer Technology Inc.

TOP  
TRANSMISSION  
AND DISTRIBUTION  
SOLUTION PROVIDERS



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*The annual listing of 10 companies that are at the forefront of providing Transmission and Distribution solutions and transforming businesses*

## Pennsylvania Transformer Technology Inc. Innovating Transformer Technology of the Future Since 1929

City planners, architects, and other construction professionals have several responsibilities to keep in mind before starting a project. And, a steady supply of electricity is irrefutably one of the main points of discussion. Only a few years ago, setting up a power grid or new transformer infrastructure was a fairly straightforward process. However, today, the challenges of rapid urbanization, aging infrastructure, and growing security concerns are quickly falling into the purview of governments and businesses everywhere. Transmission and distribution solution providers thus support the market with a high level of subject matter expertise

to curb ongoing and impending hurdles to the progress of existing cities and large facilities. Furthermore, as the population continues to grow every year, there is a significant increase in the demand for more energy.

This, in turn, necessitates the re-powering of existing substations, which can prove to be an extremely daunting task when dealing with existing and aging grid infrastructures. Sandeep Chakravarty, COO of Pennsylvania Transformer Technology Inc. (PTTI), a longstanding transmission and distribution company, further expresses how the COVID-19 outbreak has added to the list of hindrances that companies and agencies everywhere

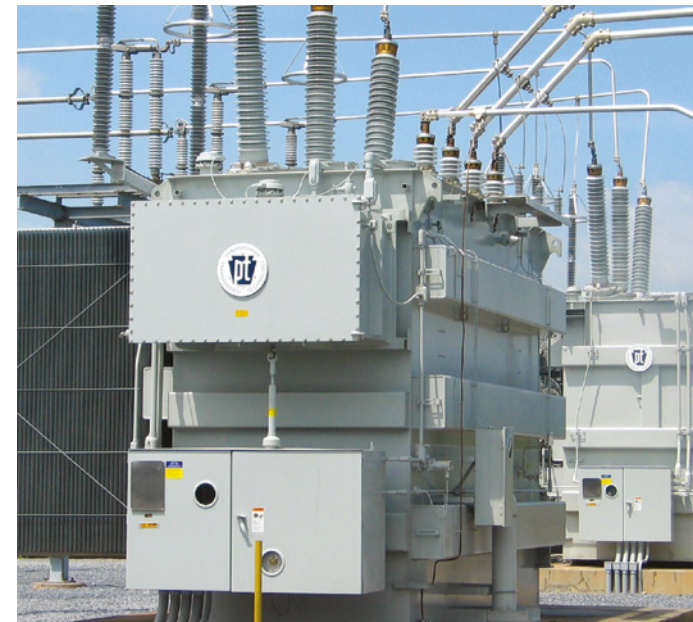
are currently facing. "Many customers today have problems in sourcing critical equipment such as transformers, which lead to delayed projects and missed timelines. The market is now turning to large, domestic manufacturers—like us—to source all their transformers needs," he explains.

Founded in 1929, PTTI is one of the oldest, most experienced US-based manufacturers in the world that offers highly reliable and powerful transformers of varying types and sizes for the investor-owned electrical utility, public and municipal power, and industrial markets. The company's equipment is presently operational across several locations in the country,

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**We have the infrastructure, process, and skilled workforce with a knowledge developed over many decades to build the largest, most complex transformers**  
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Sandeep Chakravarty



supporting U.S. armed forces alongside many federal, state, and local governments. Electric utilities, hospitals, renewable energy projects, data centers, electrical contractors, and railroads are a few of the other areas where PTTI's transformer technology and expertise are highly appreciated. It's also interesting to understand the company's secret to its 92 years of successful product delivery; it lies in its stable and progressive ownership group that strongly believes in the investment of new technologies, infrastructures, all the while ensuring a healthy workforce development. A company, especially a manufacturer, is only as good as its employees, and PTTI understands this well. With transformer units currently over 50 years old and still fully functional, the company's dedicated expertise in the field makes it the ideal transmission and distribution solution provider in the market today.

PTTI's facility in Canonsburg particularly stands out in the industry with unparalleled production competencies. "We have the infrastructure, process, and skilled workforce with a knowledge developed over many decades to build the largest, most complex transformers," states Chakravarty. PTTI's vertical integration capabilities empower its people on the shop floor to control the many processes in the facility and take on challenging applications. In its 200,000 square-foot tank shop, the company receives raw plate steel and builds its own main and conservator tanks using plasma burn tables, 600-ton bending presses, huge rollers, and blast and paint booths. The manufacturer's highly competent insulation department additionally fabricates 70 percent of all insulation pieces via panel saws, CNC routers, circle shears, brake presses, and drill presses. "Throughout our production facilities, we rely on our own processes and capabilities developed over decades and not on out-sourced components that are out of our control,"

adds Chakravarty. This promises customers a sense of uncompromised quality in any piece of equipment that will help power an entire building or city.

To further elucidate on PTTI's expertise and experience in transformer technology, Chakravarty shares the story of Duquesne Light, a local utility that reached out to the COO and his team for assistance. "The client was facing a continued problem with decreased transformer capacity due to cooler degradation on four McGraw Edison Shell Type 345 kV(kilovolt) and 392 MVA (megavolt-amperes) transmission autotransformers," he recalls. The typical solution to such circumstances would simply be to replace the coolers. However, the problem could resurface. PTTI studied the units and leveraged the latest finite element analysis (FEA) software to modify each substation and accept radiator cooling banks that were designed to fit the space available. The company also made use of additional information such as historical loading, maintenance logs, historical oil analysis results, and internal inspections of the transformers to deliver a completely customized product that resolved the client's challenges. After PTTI finished installing the modified cooling system, Duquesne Light observed a significant reduction in the need for maintenance and various costs for the service of the four critical transformers. "PTTI's extensive product knowledge, archived original design information, drawings, and ingenuity were all instrumental in completing this project with great success and exceeding the expectations of the customer," adds Chakravarty.

With such strong and varied capabilities, PTTI secures its position as one of the most prominent power transformer solution providers in the 21st century. The company dedicatedly strives to build the best equipment in the industry and offer clients throughout the nation extremely robust and safe transformers. Moving forward, the company intends to fortify the grids of the future against a new threat—cyberattacks—with its cutting—edge technology and industrial experience. PTTI also focuses on ensuring a sustainable future, thus its efforts in bringing about a change to renewable energies are expected to pay off very soon. "I see major opportunities for the growth of transformer businesses in the U.S.; we have significant room to grow our operations in Canonsburg, PA to meet increased market demands and support our customers throughout this new, technology-first world," concludes Chakravarty. 🇺🇸