

**OTD**

Operations
Technology
Development

Operations Technology Development Collaborative R&D for Progressive Utilities

For many years, natural gas utilities, both public and investor owned, have recognized the value of supporting technology developments for their customers and their own infrastructure. Industry-supported technological advances have provided improvements in the quality of service, reduced costs, greater efficiency, enhanced safety, and considerable environmental benefits. Natural gas distribution utilities have also recognized the importance of leveraging their investments with others who have similar interests to minimize the risks and improve the potential for success. Given this need, utilities are pursuing funding alternatives to support critical technology developments.

Since OTD was established in 2003, we have grown to become recognized as the natural gas industry's key source for technology development and product introduction. We are a not-for-profit corporation led by 25 members who serve over 50 million natural gas consumers in the United States and Canada. Through a unique structure, focused planning, and built-in flexibility, the OTD program addresses the industry's major needs and research challenges while providing companies with opportunities to support initiatives of specific interest.

The scope of the program includes mid- to near-term technology developments. In recent years, OTD helped to introduce new technologies for plastic-pipe location, leak detection, pipe inspection, information management, environmental issues, and other applications. The development of key data, software, and web-based information is also essential to maintaining the integrity of the natural gas infrastructure. Several projects also involve the incorporation of GPS and other information technologies to provide easy ways for companies to maintain data bases, improve planning, and address costs. With safety always the industry's top priority, most OTD efforts have a significant safety-improvement component. Others address codes, standards, environmental concerns, and regulatory-compliance issues by developing and presenting R&D results that help companies in meeting often complex government requirements.

Through collaborative programs with leading manufacturers, research organizations, industry associations, and government entities, OTD is well positioned to bring a wide array of benefits for both users and providers of natural gas and will continue to be a major force in industry progress.

Background and Utility Needs

▼ The development and implementation of new technology for gas industry field operations, whether new tools, equipment, processes, or procedures, has allowed the industry to continually improve operations while reducing operating costs. Since 1995, the gas industry in the United States has reduced its annual costs for operations and maintenance from \$3.2 billion to \$2.8 billion. Although significant, additional development and implementation of new technology can further enhance these savings while having a positive impact on safety, operating efficiency, labor requirements, reliability, and integrity.

Today, natural gas distribution utilities continue to support the need to develop technology solutions for the natural gas industry and the gas consumer, but place a stronger emphasis on working collaboratively. This is especially apparent in the distribution operations area. There are numerous benefits to working collaboratively to develop technology solutions for utilities including: the leveraging of funds (no single utility is responsible to carry the entire financial burden); the ability to gain the interest of a commercializer based on broad industry support; and using input from numerous expert sources that result in a stronger solution. There is also a significant benefit to working collaboratively on programs or projects that can impact regulatory issues, such as pipeline integrity management.

Operations Technology Development Program Overview

▼ Operations Technology Development (OTD) develops, tests, and implements new technology, providing solutions to a wide range of issues relating to gas operations and its infrastructure. It is designed to provide new tools, equipment, software, processes, or procedures that will enhance safety, increase operating efficiency, reduce operating costs, and help maintain system reliability and integrity.

Membership

▼ The cost of participating in OTD is between US\$150,000 and US\$750,000 per company per year. The number of customers, at 50 cents per customer, determines the funding level for each participant. Each participating company votes with their funds when selecting projects of interest. In the case where companies fall significantly below the US\$150,000 range, aggregation can be an option providing it adheres to a set of guidelines approved by the OTD Board. For example, the APGA Research Foundation aggregates the financial resources of its members and participates in OTD as a single company. The funding commitment is for an initial one-year period, with annual approval thereafter.

The OTD program focuses its technology development efforts on distribution and transmission activities identified by the members. The RD&D program includes a mix of short-term (less than 3 years) quick-response research, engineering, or testing activities; and mid- to longer-term research projects (3-5 years to implementation). The current OTD projects are divided into the following six project categories:

- Pipe and Leak Location
- Pipe Materials, Repair and Rehabilitation
- Excavation and Site Restoration
- Pipeline Integrity Management and Automation
- Operations Infrastructure Support
- Environmental, Renewables, and Gas Quality

OTD Governance

▼ The overall structure of this gas distribution utility partnership program is shown in Figure 1. OTD retains the assets of the Partnership. This includes the cash assets of the technology development budget and any intellectual property. OTD has been established as a not-for-profit corporation.

OTD Partnership Structure

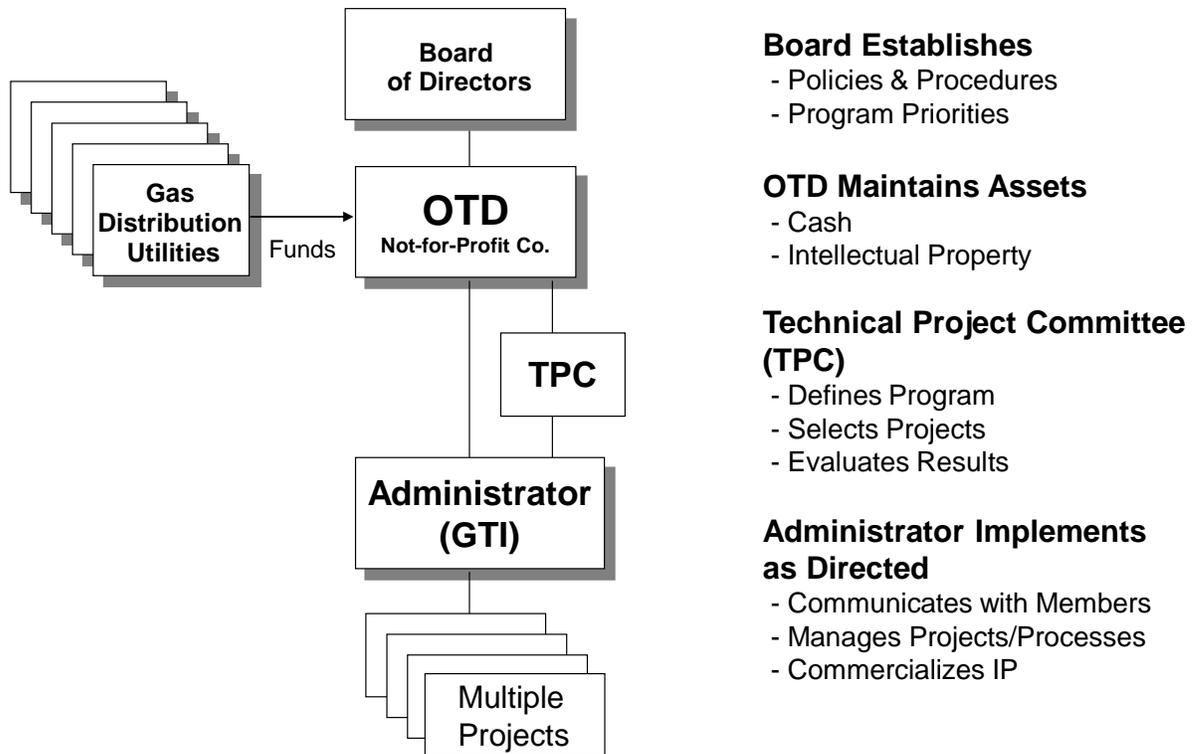


FIGURE 1

The OTD Board of Directors consists of one member from each participating company. The Board establishes the policy and procedures that govern the operation and conduct of the partnership, provides strategic guidance on program priorities, and sets long-term goals and objectives.

The Technical Project Committee (TPC) is comprised of representatives from the participating companies who are knowledgeable in gas industry operations and the challenges and problems they face. The TPC identifies the overall operational issues to be addressed in the program, and the specific topics that will be the focus of individual research projects. GTI, working with OTD TPC members, identifies research and technology development options with potential for providing solutions to the problems being addressed. The TPC reviews the progress of individual projects and provides direction on project continuations, terminations, and initiations. TPC members are also the main conduit for disseminating the results and deliverables from the program into their companies.

GTI is contracted by OTD as the Administrator to provide services including overall management, project management, technology commercialization, and all administrative functions.

Project Funding

Individual projects are proposed by various sources including OTD members and research performers. Those proposals are reviewed and prioritized by the OTD members. Projects designated as high priority to one or more members are presented to the membership for funding consideration. Each member has control over their funds and determines what to fund and how much to invest on each project. A participating member has the option to fund or not fund an individual project. The program operates on a "customer choice" basis, with each member investing in the projects they wish to fund.

Additional Information

If you would like additional information on OTD,
please contact:

- ▼ **Maureen S. Droessler**
OTD VP Operations
224/659-8604
maureen.droessler@otd-co.org

- ▼ **Ron Snedic**
OTD President
847/768-0572
ron.snedic@otd-co.org