

Refining and Chemicals



Advanced expertise and integrated team for project success

We pride ourselves on maintaining long-term client relationships based on mutual respect, openness and flexibility. This trust positively impacts the value of our projects

Tetra Tech's long-term relationships with its clients is based on an extensive track record in executing and delivering refining and chemical projects. We provide full engineering and environmental services through the entire project life cycle to meet evolving regulations, maintenance, and sustainability requirements. These include grassroots refineries to major renovations and expansions, complex turnarounds, residue upgrading, and clean fuel projects

We offer our clients comprehensive understanding of government and local permitting requirements, licenses and certificates, experience in preparing third party environmental impact statements (EIS) and carrying out integrity audits.

Our services extend from initial studies, detailed feasibility studies, front-end engineering package development, detailed engineering, procurement and construction management, to final commissioning and start-up. Tetra Tech partners with its refinery clients to achieve higher production efficiency, maintain high environmental and safety standards, and sustain profitability, and capital efficiency.



Comprehensive expertise in refining and chemical processes and technologies

Tetra Tech has been executing refining projects for over 20 years. Our projects range from relief valve validations and power supply modernization to revamps of crude oil fractionation units and major refining process units and turnaround support. We have the ability to do process modeling and to support construction and start-up on the back end.

Tetra Tech's differentiator is our ability to execute small projects efficiently. Our decades long experience in executing small project means we will deliver a quality product, on-time and on schedule.

Refining and chemical industry services and capabilities

Engineering Design

- Petroleum Refining
 - Crude & Vacuum fractionation
 - Hydro-processing
 - Catalytic reforming
 - Catalytic cracking
 - Bottoms upgrading
 - Light ends processing and recovery
 - Clean fuels design
 - Facility upgrades and debottlenecking
 - Process safety management
 - Pressure relief systems
 - Energy efficiency
 - Offsite and utility systems
 - Hydrogen management and optimization
 - Waste water and water treatment
- Process engineering studies
- Front-end engineering design (FEED, FEL-1, 2, 3)
- Detailed engineering
- Facility planning and engineering
- Gas, chemicals, and petrochemicals processing
- Cost estimation
- HAZOP studies
- Owner's engineering services

Planning, Environment, and Permitting

- Market analysis and investment planning
- Project concept regulatory strategy development
- Due diligence
- Site and licensor selection
- Licensing and permitting
- Environmental planning permitting
- Stakeholder management
- Contaminated assessment and remediation

Operations and Management

- Commissioning
- Start-up procedures
- Operations procedures
- Maintenance procedures
- Training, operations, and maintenance
- Security
- Fire protection evaluations and prevention plans
- Emergency response plans
- Shutdowns and turnarounds
- Process Safety Management (PSM)

Construction Management

- EPC/EPCM
- Design-build
- Design bid-build
- Project management
- Procurement
- Cost estimating
- Bid conditioning and negotiations
- Scheduling
- Subcontractor management



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