

# Trans Adriatic Pipeline: successful combination of multiple skills

## Snapshot

### Client

Trans Adriatic Pipeline AG

### Challenge

Development, construction and commissioning of onshore/offshore (Adriatic Sea) natural gas pipeline and associated facilities from the Greece-Turkey border to southern Italy.

### Solution

Multi-disciplinary technical services to support a complete range of project requirements including front end engineering design, environmental assessment, procurement, permitting, logistics and detail engineering, as well as first-hand experience to support decision making.

### Benefits

Technically sound and cost-effective design and engineering giving a high priority to environmental protection, corporate social responsibility and safety. Construction permits granted on schedule. Combination of internal and external skills and resources – including country-specific capabilities – delivered a very successful project development and delivery.

Providing key services to the Trans Adriatic Pipeline (TAP) – part of the Southern Gas Corridor development to transport natural gas from the Caspian Sea to Europe – we are a single source of multi-disciplinary expertise backed by long experience in developing and operating gas infrastructure.

### Future gas supply

The TAP comprises a 770km onshore pipeline crossing northern Greece from its border with Turkey, across Albania and then a 100km offshore section to reach southern Italy. A key element of future gas supply in Europe, it will have a capacity of 10 bcm of gas per year when operational in 2020 with the flexibility to expand to 20 bcm per year in the future.

We have acted as Technical Service Provider for the development of the onshore pipeline and all associated facilities in Greece, Albania and Italy – including compressor stations on the Turkish border and Albanian coast, a fiscal metering station at the Greek/Albanian border, pipeline receiving terminal in Italy, and 33 block valve stations – as well as providing overall system design.

### High standards of design and safety

A central element of our service was a front end engineering design (FEED) package in line with European Bank for Reconstruction and Development requirements. We led the environmental and social impact assessment and stakeholder engagement process in parallel with technical design to ensure not only a technically sound and cost-effective, but widely supported, route for the pipeline.

Our support for permitting, tenders and contracts, as well as site access, logistics and detail engineering enabled construction work to align with the project’s overall schedule.

**Our interdisciplinary project, implemented across four countries, was delivered safely, on budget, on time and to specification.**





The TAP route to southern Italy across Albania and Greece

### Scope of our services

- Project management services
- Quality and document management
- HSE and compliance
- Project control (schedule, cost and risk management, reporting)
- Project development, engineering and design
- Routing and system design (pipeline hydraulic calculation)
- Pipeline design including block valve stations
- Design of compressor stations and receiving terminal
- Design of fiscal metering facilities
- Safety studies including Quantitative Risk Assessment
- SCADA system design
- Logistic concept (marshalling yards, access roads and bridges)
- Establishment and operation of the GIS
- Development of the operation and maintenance concept
- Authority engineering and permit concept development
- Performance of the Environmental and Social Impact Assessment studies
- Preparation of permit application packages and obtaining of pre-approvals for construction permits in Greece and Albania.
- Land and Easement Acquisition development
- Landowner identification
- Digitalization and Cadastral data development
- Compensation value study
- Corporate Social Responsibility development and support

### Flexible team

To deliver the wide range of services on time and respond to the project’s changing needs and challenges we formed a project task force and established branch offices in Greece, Albania and Italy. Our experts were therefore close-at-hand and able to respond quickly and flexibly.

At peak times our team comprised more than 200 experts across five countries. We also handled more than 200 subcontracts from our offices in Gelsenkirchen.

### Challenging statistics

- Approx. 770 km onshore pipeline (48 & 36 inch, 95 bar) in Greece, Albania and Italy designed for 10 BCM/a with the possibility to extend to 20 BCM/a including approx. 24 x 48 inch block valve stations, 2 x 36 inch landfall valve stations.
- 2 compressor stations (3 x 15 MW), 1 receiving terminal including pressure reduction, 1 metering station.
- Interface coordination with interconnecting systems, fiscal metering.

### Services in executive phase

We supported TAP during its major contracts procurement process with prequalification support for long lead items (CPI’s) and services (EPC contracts), technical tender document production and evaluation support.

We also continued permit services in Greece and Albania up to completion and will support TAP’s project management team to the planned start of commercial operation in 2020.

## Discover Energy Services

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