



# TANQIA ENVIRONMENT



Corporate Brochure



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# Tanqia Environment



**Established in the UAE in 2002, Tanqia Environment provides corporate solutions in the water and wastewater treatment sectors through a full range of integrated services.**

**From the initial concept and design through development, financing, construction, operation, maintenance and management, we are able to provide individual or multiple services that meet the needs of our clients, either public or private.**

As owner and operator of one of the leading privately held wastewater collection and treatment systems in the Middle East, Tanqia has helped usher in a new era of wastewater treatment utilizing state-of-the-art processes to achieve the highest levels of efficiency.

With a focus on sustainability, Tanqia designs wastewater treatment systems to minimize their environmental footprint and maximize efficiency to produce treated water for clients in the industrial, agricultural and energy sectors.



PART OF THE FUJAIRAH WASTEWATER TREATMENT SYSTEM IS REFLECTED IN A SEDIMENTATION TANK



**Returning a  
valuable resource  
back to the land.**





## Investment

- Financing
- Ownership

## Development

- Concept
- Design
- Construction

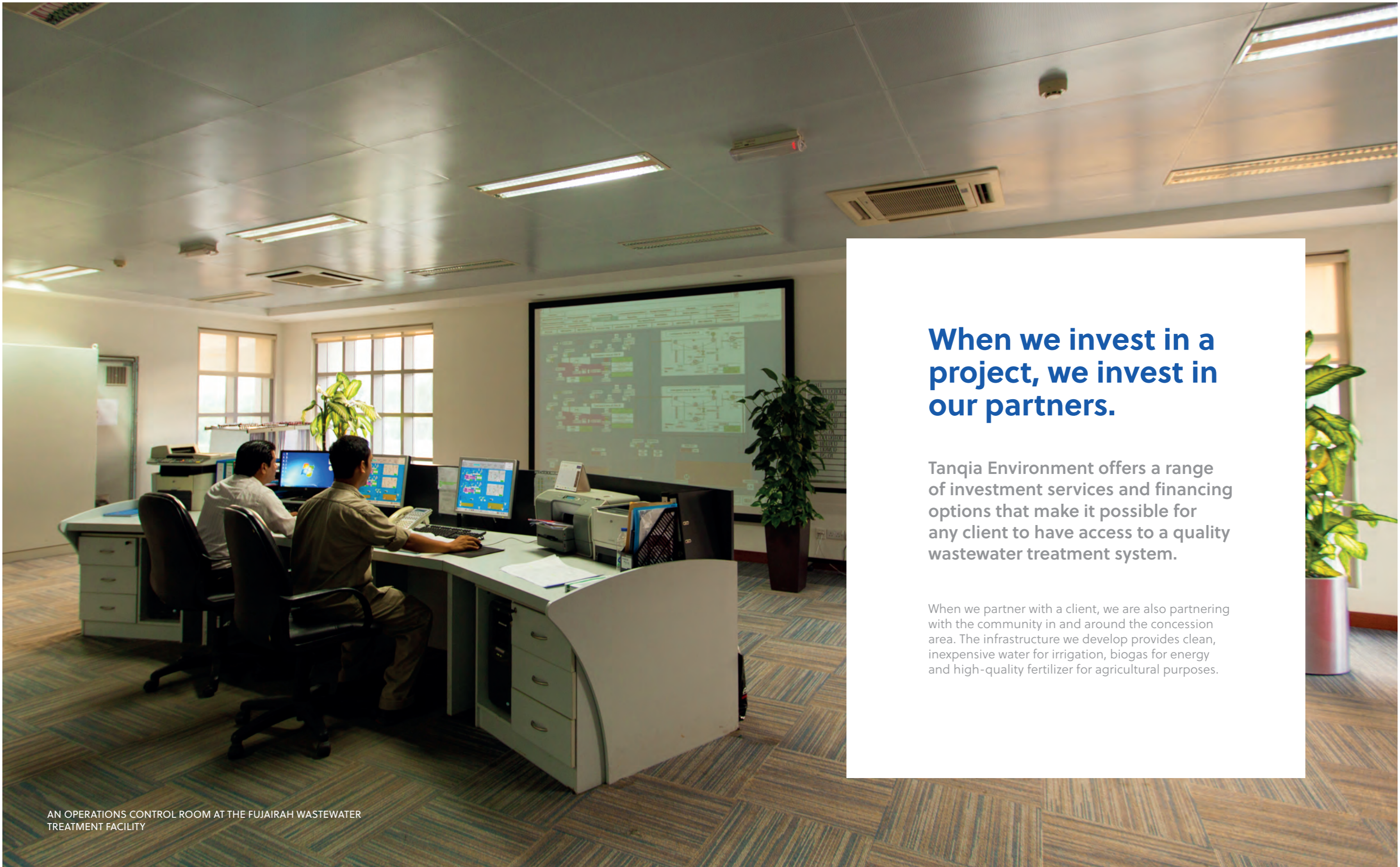
## Operations & Maintenance

- Day-to-day operations
- Preventative maintenance
- Technical support
- Quality oversight
- Repair and rehabilitation of existing facilities
- Administrative management
- Technical and efficiency audits

THE SECONDARY SEDIMENTATION TANK OF THE FUJAIRAH WASTEWATER TREATMENT SYSTEM WHERE BIOMASS AND WATER ARE SEPARATED



# Investment



AN OPERATIONS CONTROL ROOM AT THE FUJAIRAH WASTEWATER TREATMENT FACILITY

## When we invest in a project, we invest in our partners.

Tanqia Environment offers a range of investment services and financing options that make it possible for any client to have access to a quality wastewater treatment system.

When we partner with a client, we are also partnering with the community in and around the concession area. The infrastructure we develop provides clean, inexpensive water for irrigation, biogas for energy and high-quality fertilizer for agricultural purposes.





**Investing in  
infrastructure,  
investing in the  
region.**





## Investment Services

### Financing

We offer flexible financing tailored to our clients' needs and designed to save clients significant resources over the long term. By offering services from financing to development to maintenance, we can offer better rates than most single-service companies.

### Ownership

Our partnership with the client often does not stop when the facility is complete. Our systems do more than provide a service, they become an asset, and based on the client's needs, we are happy to be the partial or full owner of that asset.





# Development



## Built from the ground up to maximize safety and efficiency.

Each system is developed with careful consideration of our clients' needs, the surrounding landscape, environment and existing infrastructure.

We undertake extensive research and planning to ensure that we deliver the best possible system for the defined purpose. Being able to develop a system from concept and design through construction and operation also puts us in a better position to anticipate challenges and maximize its benefits.



**Utilizing efficient  
systems and the  
best technology.**





## Concept

The conceptual process takes into account a multitude of factors that help us provide a facility meeting the client's unique needs and anticipating the potential growth and challenges of the concession area. We work with some of the best engineers in the industry to ensure that the system we ultimately create meets the highest international standards in wastewater treatment.

## Design

In designing the plant, we take into account not just how the plant will work as a whole, but how its operators will interact with the system's various components. Our wastewater treatment systems feature high-performance, energy-efficient technology with low operational costs. By utilizing measuring and control technology, we implement highly advanced treatment processes to convert the wastewater delivered to the plant into high-quality effluent.

## Construction

Tanqia Environment goes to great lengths to ensure that the construction phase is completed on schedule and on budget. Having built in the region before, we are keenly aware of the challenges faced during the construction process, from the rules and regulations regarding zoning and procedure to the geographic variables found throughout the region on construction sites.

THE GRIT AND GREASE CHAMBER OF FUJAIRAH WASTEWATER TREATMENT PLANT,  
THIS UNIT REMOVES GRIT AND GREASE.



# Operations & Maintenance



## Operations & Maintenance

Overview

**Tanqia Environment is made up of a multidisciplinary team with complementary backgrounds in project development, finance, engineering, operations and maintenance, construction supervision, and billing and accounting.**



**Collectively, the senior management team has completed over \$1 billion in project financing across three continents.**

Having been involved in every stage of planning, building and maintaining a wastewater treatment utility, we bring deep knowledge and experience to our Operations & Maintenance division.

With decades of experience in all aspects of the wastewater treatment sector, we are able to offer a variety of operations and maintenance services, including plant and network audits, upgrades and extensions, system assessments, implementation of operating procedures and preventative maintenance plans, staff training, and health and safety reviews.

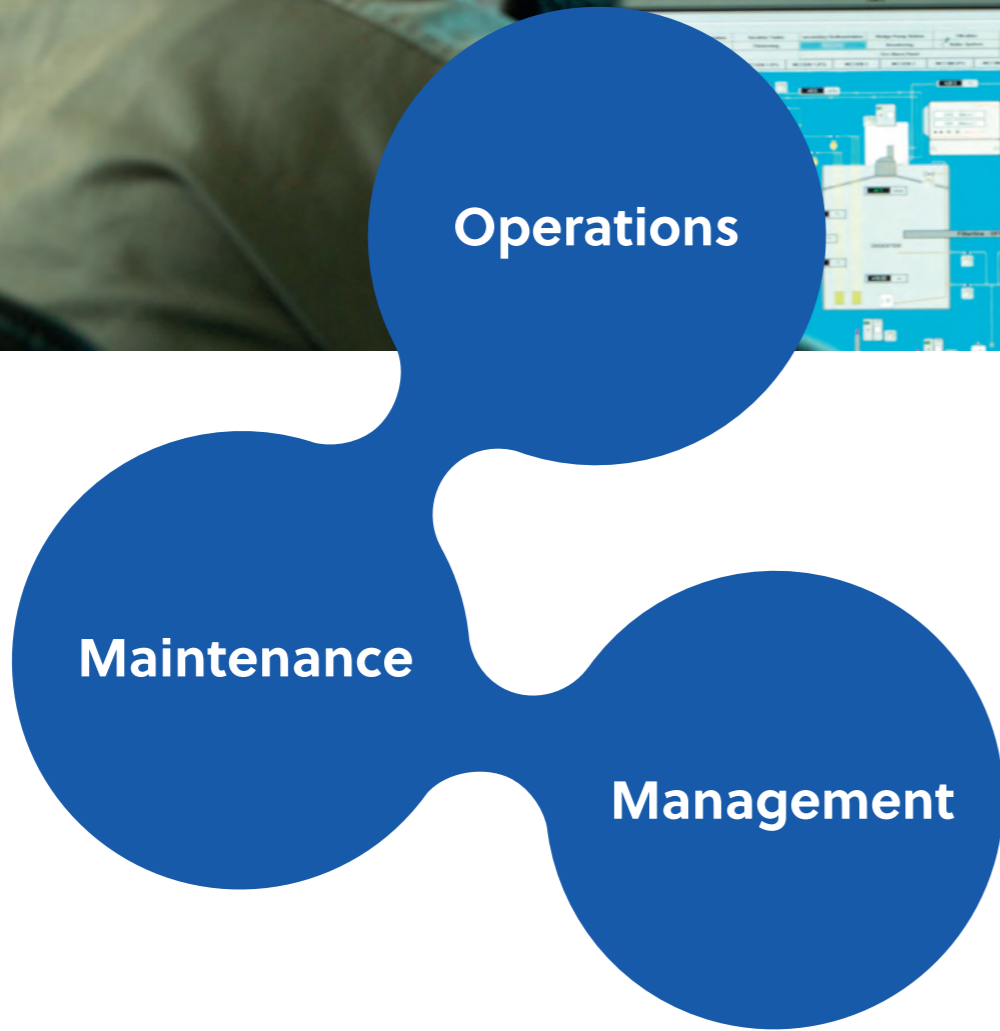
In addition to treating wastewater, we recover valuable resources that can be reused or distributed into the market to free higher-value products for more productive use. We specialize in enhanced resource recovery, overseeing effluent marketing and distribution, soil enhancement, recyclables and methane recapture. We liaise with local authorities to enhance the end-user service experience by integrating these offerings into existing billing and customer service systems whenever possible to provide convenient benefits for our customers and strengthen long-term client relationships.





**Maintaining  
standards,  
excelling in  
efficiency.**





## Operations

- Day-to-day operations
- Quality oversight
- Standards assurance

## Maintenance

- Preventive Maintenance, Corrective Maintenance and Emergency Response
- Rehabilitation of existing facilities
- Technical support

## Management

- Administrative management
- Scheduling
- Payroll
- Hiring
- HR services



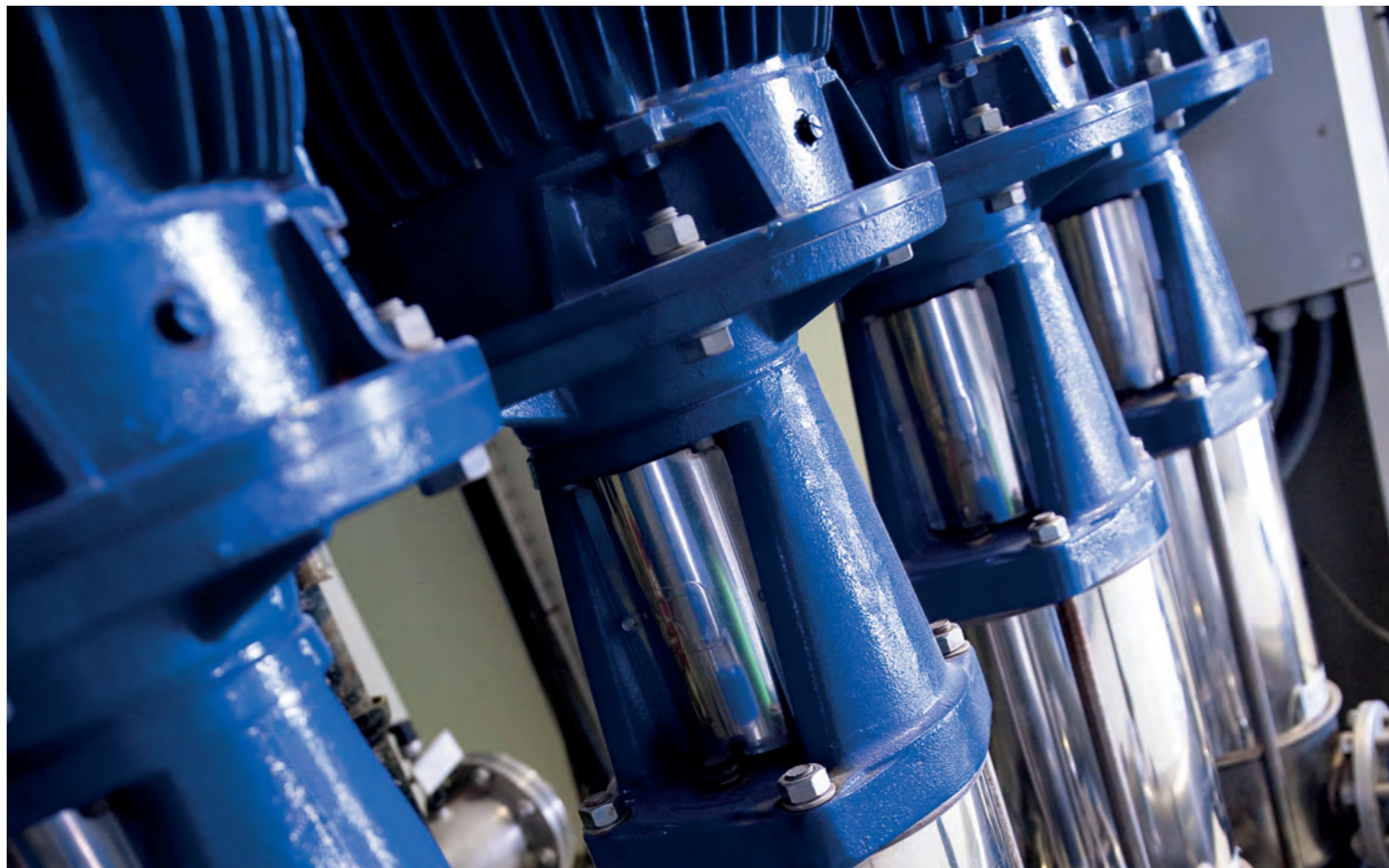
# Case Study



## Case Study

Overview

**The Fujairah Wastewater Treatment System was designed, financed and built by our subsidiary, Tanqia Fujairah, of which we continue to be the majority owner and O&M contractor.**



**We oversee the collection and treatment of roughly 21,000 m<sup>3</sup> of wastewater per day from about 6,500 connected properties.**

The system is comprised of a collection network about 434 km long, which includes 30 pumping stations, a wastewater treatment plant and a sea outfall system. The concession area spans 92 km<sup>2</sup> and is being expanded to serve future industrial and residential developments in the Emirate. We are also currently expanding our plant's treatment capacity from 16,000 to 24,000 m<sup>3</sup> per day to meet the rising demand for

wastewater treatment services in Fujairah. The Wastewater Treatment System serves a current population of over 100,800 and has a monthly wastewater flow of about 600,000 m<sup>3</sup>, producing a monthly output of about 37,000 m<sup>3</sup> of biogas (normal pressure) and about 109 tons of treated sludge free of pathogens and odor.

Tanqia has overseen every aspect of the facility and maintained optimum efficiency levels since its commissioning. The facility has earned the ISO 9001 and ISO 14001 certifications, reinforcing the effort we make to achieve the highest standards in quality management and environmental management systems.



# Case Study

Map - Fujairah Wastewater Treatment System

## Concession area

92 km<sup>2</sup>

## Total network length

434 km

## Total number of pumping stations

30

## Daily treatment capacity

16,000 m<sup>3</sup>

## Daily sludge output

3.5 tons

## Monthly biogas production

37,226 Nm<sup>3</sup>

1 km



Qidfa

Miraba

Qurayya

Port of Fujairah

Al Hilal

City of Fujairah

Al Hayle

Iran

Abu Dhabi

UAE

Oman

Saudi Arabia



## Case Study

Investment, Development, and Operations & Maintenance

### Operations & Maintenance

TANQIA Fujairah's 16,000 m<sup>3</sup>/day Wastewater Treatment Plant was commissioned in 2008 and is located 11 km north of the City of Fujairah. The utility's collection network spans over 92 km<sup>2</sup>, comprises of pressure main, primary and secondary networks.

In the treatment plant's central control room, skilled technicians rigorously monitor the quality of the plant's influent and effluent 24 hours per day, 365 days per year. State-of-the-art technology monitors each stage of the clarification process and analyzes the data continuously to ensure consistency and quality.

The utility's operations and maintenance are performed by Tanqia-Siyana, an O&M services contractor 100% owned by Tanqia Environment, pursuant to a 33-year Operations and Maintenance Agreement. Through Tanqia-Siyana, Tanqia Environment has been at the forefront of the water and wastewater sectors in the Emirate and is currently providing leadership in the vital area of wastewater reuse.

### Investment & Development

Established in 2002 with the granting of a 33-year Concession Agreement, Tanqia Fujairah is the wastewater utility for the City of Fujairah, a rapidly growing city located in the United Arab Emirates.

The utility serves over 100,000 residents and treats about 21,000 m<sup>3</sup>/day, with additional 16,000 m<sup>3</sup>/day treatment capacity expansions being planned between 2016 and 2022. In addition, Tanqia Fujairah is responsible for the marketing and distribution of treated wastewater for non-potable uses throughout the city, working with the municipality and private sector to ensure that this valuable resource is put to productive use.

Tanqia Fujairah was conceived, developed and is majority-owned by Tanqia Environment. The utility's other shareholders are Mubadala Development Company of Abu Dhabi and the Overseas Trading Company of Fujairah. At each stage of the design, development and construction process, Tanqia Environment worked with the world's leading practitioners to ensure quality and reliability. The utility's treatment plant and network were designed and constructed by the German joint venture of Bilfinger Berger AG, PASSAVANT Energy & Environment GmbH and Fichtner GmbH & Co. KG. Allen & Overy and Denton Wilde Sapte represented Tanqia Environment and the Government of Fujairah, respectively, in the complex structuring of the concession agreement.

**Skilled technicians rigorously monitor the quality of the plant's influent and effluent 24 hours per day, 365 days per year.**

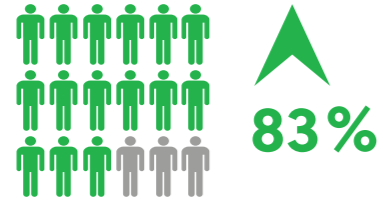


**Ensuring the  
highest quality  
output.**



# Case Study

Facts & Figures



### Connected population

2008 - 68,780

2016 - 100,853



### Connected properties

2008 - 5,231

2016 - 6,500



### Monthly wastewater flow

around 600,000



**Expansion**

Treatment Capacity  
16,000 – 24,000 m<sup>3</sup>/day





**Taking action  
now for future  
generations.**





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