

Under the Patronage of His Excellency **Eng. Abdulrahman bin Abdulmohsen AlFadley**
Minister of Environment, Water & Agriculture

منتدى المياه السعودي

saudi water forum **SWF 2024**

Operational Excellence in Water Transmission Systems and Strategic Storage

Ali Alnashri



29 April – 01 May 2024



Hilton Riyadh Hotel & Residences
Riyadh, Saudi Arabia

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وزارة البيئة والمياه والزراعة
Ministry of Environment Water & Agriculture



المؤسسة العامة لتحلية المياه المالحة
Saline Water Conversion Corporation (SWCC)



شركة المياه الوطنية
National Water Company



الشركة السعودية لشركات المياه
Saudi Water Partnership Company



المؤسسة العامة لتقنية
المياه
National Water Efficiency and Conservation Center
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شركة نقل وتقنيات المياه
Water Transmission and Technologies Co.



منظّم المياه
Water Regulator



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Overview

7 systems of water transmission extend from the eastern and western coasts. They are distributed to the beneficiary areas in various parts of the Kingdom, which are linked to a network of pipelines to transmit water to the eastern, western, central, and southern provinces.

350+
Tanks

10,100 km length of
Transmission lines

6.6 million m³/day
Daily Pumping
Rate

75+
Pumping stations

Power consumption and efficiency

WTTCO Conduct an analytical studies with consulting contractor to improve both power factor and pumping systems efficiency by comparing actual operating data with pump characteristic curves to reach the BEP of pump .

The study results and recombination help to improve :

01

Reduce the power consumptions.

02

Minimize the risk of pump failure.

Transmission System Reliability and Dependencies

One of the innovation plan that WTTTCO attempt to study hydraulically the implementation of interconnecting between two main pumping systems at two different city gates .

01

Increase
interchangeability
rate

02

Enhance the reliability
and dependability of
pumping stations

03

Ensure a continuous
water supply to city
gates

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The Role of Water Transmission and Technologies Co. in Enhancing Water Security

Ahmad Alzahrani



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Importance of Water Security in the kingdom

01

Water security is crucial for sustainable development and quality of life.

02





Saudi Arabia faces unique challenges due to its arid climate and limited freshwater resources.

03

Ensuring water security is vital for economic stability, social well-being, and environmental sustainability.

WTTCO Existing Water Transmission Systems



-  **Transmission systems**
10,100 KM
-  **Pumping stations**
75+
-  **Daily pumping of water**
6.6 m³/d
-  **Tanks**
+350

T&S Projects Portfolio up to 2030

Total Number of Projects

396

Total Budget

140 Billion Saudi Riyals

Water Transmission Projects



33

Projects

16

Million m³/D

87

Billion Saudi Riyals

Strategic Tanks Projects



314

Projects

79

Million m³

43

Billion Saudi Riyals

Completing Projects



47

Projects

0.8

Million m³/D

8

Billion Saudi Riyals

Other Projects

2

Projects

1.8

Billion Saudi Riyals

3-Years look ahead Projects

Total Number of Projects

270

Total Budget

87 Billion Saudi Riyals

Water Transmission Projects



14 Projects

7.5 Million m³/D

52 Billion Saudi riyals

43 Pumping station

Strategic Tanks Projects



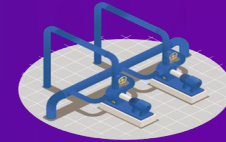
210 Projects

49 Million m³/D

27 Billion Saudi riyals

600 Tanks

Completing Projects



47 Projects

800,000 m³/D

8 Billion Saudi riyals

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The company's Experience in Developing Supply Chain Operations

Abdulaziz Alabdulqader



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Major Achievements and Initiatives to Improve Supply Chain Procedures

01

Excellence in Procurement Award provided by SAP.

02

Evaluate and improve business quality of success partners.

03

Improve the diversity and development of WTTCO's vendor database.

04

Strategic Supply.

05

Raise the awareness of SCM operating procedures.

06

Implementation of MRP system.

The Impact of Supply Chain Enhancement on WTTCO's Performance

01

Improve operational effectiveness by 40%.

02

Increase supply chain operations productivity.

03

Minimize the duration of Supply Chain procedures by 50%.

04

Consolidate and strengthen the relationship between Vendors and WTTCO.

05

Achieve added value to the water sector for sustainability and quality.

06

Encourage competitive practices in the water sector.

07

Reduce cost and operational resources by 30%.

08

Build a vivid mental image of WTTCO's appreciation to success partners efforts

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The company's Role in Increasing the efficiency of Water Transmission and Strategic Storage activities in the Kingdom

Abdulaziz AlRusais



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Increasing the efficiency of water transmission and strategic storage in the Kingdom

Key principles

Best Practices

- Planning
- Specifications
- Optimization

Advanced Technology

Renewable energy

Sustainability

- Materials
- Equipment

Goals

Saving resources

Reducing Risk

Reducing Cost

2023

21

Projects



Designed
reservoirs capacity

14.2+ M m³



projects
Value

15.6+ Bn SAR



Total designed
transmission lines

1300+ Km



Number of
Reservoirs

224 Reservoirs

2024

24

Projects



Designed
reservoirs capacity

34.6+ M m³



projects
Value

21.3+ Bn SAR



Total designed
transmission lines

2300+ Km



Number of
Reservoirs

310 + Reservoirs

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THANK YOU!



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