



وزارة الأشغال
Ministry of Works

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Performance-Based Contracts in Wastewater Treatment Projects

#فريق_البحرين
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Historical Work Implementation Path Applied in the Operation & Maintenance of Wastewater Treatment Plants

1. Local Purchase Order.
2. Manpower & Equipment Supply Contracts.
3. By- Activities Contracts.
4. Performance Based Contracts.
5. Public Private Partnership (PPP)

Introduction to Performance-Based Contracts:

- **Definition:** Contracts where payment is linked to performance indicators.
- **Purpose:** Improve efficiency, accountability, and service delivery in wastewater management.

Steps to Implement a PBC

1. **Calculate Budget:** Determine required funding.
2. **Establish KPIs:** Create measurable indicators.
3. **Scope of Work:** Develop comprehensive performance requirements.
4. **Assign Payment Structure:** Define time and volume components.
 - **Time-Based Payment:** 60-75% of total payment.
 - **Volume-Based Payment:** 25-40% of total payment.

Steps to Implement a PBC

5. **Assess Plant Condition:** Evaluate the wastewater treatment facility.
6. **Identify Assets:**
 - Spare Parts
 - Chemicals
 - Equipment
7. **Monitoring System:** Implement evaluation processes.
8. **Regular Reviews:** Adjust the contract as necessary.

Performance Indicators

- **Key Performance Indicators (KPIs):** Establish measurable indicators.
- **Target Values:** Set specific goals for each KPI.
- **Alignment:** Ensure KPIs align with project objectives.

Measuring Performance

- **Monitoring System:** Develop a regular measurement process.
- **Data Sources:** Use objective data for assessments.
- **Transparency:** Maintain fairness in performance measurement.

Example of Performance Standards set in the tender of O&M of Madinat Khalifa STPs:

Table 7: PERFORMANCE STANDARDS

Standard	Description	Satisfactory Criteria
PS-A	Manpower Availability and System Functionality	<ul style="list-style-type: none"> - The Minimum number of required work force as per attached Scope of Work (SOW) must be available on daily basis to manage, operate and maintain each plant. - All Wastewater treatment facilities shall be in an operational state for at least 90% of the time during each day, and there shall be no contained Influent Wastewater within the treatment plant throughout the day. <p><u>Refer to Table-8 for deduction proportion in case of unavailability of staff or Non-functional facilities.</u></p>
PS-B	Treated Sewage Effluent (TSE) Discharge	<p>If the influent (Raw Wastewater) quality parameters are within the design criteria, Treated Sewage Effluent (TSE) parameters should comply with the design standards for each individual plant.</p> <p><u>If (5%) of the average monthly value of any TSE Parameter for any plant exceeds its TSE design standards, no payment should be made for this PS-B item for the concerned plant unless there is a valid reason subject to the client's review.</u></p>
PS-C	Sludge and other Residuals Disposal	<p>Full compliance with Employer's requirements for each plant:</p> <ul style="list-style-type: none"> - The dewatering and drying of the excess sludge and transporting it to approved disposal landfill. - The transportation and disposal of other residuals (grit, oil, grease, and screenings) to approved disposal landfill.

Benefits of PBCs

- **Efficiency:** Improved resource utilization.
- **Accountability:** Enhanced transparency and responsibility.
- **Outcome Focused:** Greater emphasis on service delivery.
- **Risk Reduction:** Shared risks between client and contractor.
- **Contractor Flexibility:** Flexible to control manpower and work schedule.
- **Innovation:** Incentivizes the contractor to find creative solutions to improve performance.
- **Long-Term Focus:** Encourages the contractor to take a proactive approach to asset management and maintenance.

Conclusion

PBCs foster collaboration, optimize resources, and enhance service quality in wastewater management.



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Thank You

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