

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade AA)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 100
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Civil or Mechanical Engineer W/CRPEP License	2	10	7
Civil Engineers W/CRPEP License	1	5	3
Mechanical Engineers W/CRPEP License	1	5	3
Safety officer	1	5	5

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Amount of Single Largest Completed Project in the application field in the last 3 years valued equal or more than **BD1,500,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	4	Dewatering Pumps (6")	8
Loader	3	Water Tankers (5000L)	2
JCB	4	Vacuum Tankers (15000L)	2
Dumping Truck	4	Rollers (up to 5T)	2
Dumping Pick Up	4	Jumping Plate Compactor	5
Hiab (High-up)	2	Service vehicle	7

- Owned Basic Plant.

#### Note:

- The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade AA-International)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 100
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Civil or Mechanical Engineer	2	10	7
Sr. Mechanical Engineer	1	10	7
Civil Engineers	1	7	5
Mechanical Engineers	1	7	5
Safety officer	2	5	5

- Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety " completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Amount of Single Largest Completed Project in the application field in the last 3 years valued equal or more than **BD 8,000,000/-**.
- Minimum 4 Projects completed in the field of application in the last 3 years.
- Minimum no. of 8 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	4	Dewatering Pumps (6")	8
Loader	3	Water Tankers (5000L)	2
JCB	4	Vacuum Tankers (15000L)	2
Dumping Truck	4	Rollers (up to 5T)	2
Dumping Pick Up	4	Jumping Plate Compactor	5
Hiab (High-up)	2	Buses (transportation)	15

- Owned Basic Plant.

#### Note:

- The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade A)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 75
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Civil or Mechanical Engineer W/CRPEP License	2	10	7
Civil or Mechanical Engineer W/CRPEP License	1	5	3
Safety officer	1	5	5

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Amount of Single Largest Completed Project in the application field in the last 3 years valued equal or more than **BD1,500,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party)
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	3	Dewatering Pumps (6")	6
Loader	2	Water Tankers (5000L)	2
JCB	2	Vacuum Tankers (15000L)	2
Dumping Truck	2	Rollers (up to 5T)	2
Dumping Pick Up	2	Jumping Plate Compactor	3
Hiab (High-up)	1	Service Vehicle	5

- Owned or Leased Basic Plant.

#### Note:

- The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade B)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 50
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Civil or Mechanical Engineer W/CRPEP License	1	10	7
Civil or Mechanical Engineer W/CRPEP License	1	5	3
Safety officer	1	5	5

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD. 1,000,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Project completed in the field of application in the last 3 years.
- Minimum no. of 4 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	2	Dewatering Pumps (6")	4
Loader	2	Water Tankers (5000L)	1
JCB	2	Vacuum Tankers (15000L)	1
Dumping Truck	1	Rollers (up to 5T)	1
Dumping Pick Up	1	Jumping Plate Compactor	3
Hiab (High-up)	1	Service Vehicle	4

- Owned or Leased Basic Plant.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade C)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 35
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Senior Civil or Mechanical Engineers w/CRPEP License	1	7	5
Civil or Mechanical Engineers w/CRPEP License	1	5	5
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD. 500,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Project completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	2	Dewatering Pumps (6")	3
Loader	1	Water Tankers (5000L)	1
JCB	2	Vacuum Tankers (15000L)	1
Dumping Truck	1	Rollers (up to 5T)	1
Dumping Pick Up	1	Jumping Plate Compactor	1
Hiab (High-up)	1	Service Vehicle	3

- Owned or Leased Basic Plant.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade D)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 20
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Civil or Mechanical Engineer W/CRPEP License	2	5	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 250,000/-** . *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Project completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	1	Dewatering Pumps (6")	2
Loader	1	Water Tankers (5000L)	1
JCB	2	Vacuum Tankers (15000L)	1
Dumping Truck	1	Rollers (up to 5T)	1
Dumping Pick Up	2	Jumping Plate Compactor	1
Hiab (High-up)	1	Service Vehicle	2

- Owned or Leased Basic Plant.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & (TSE / Grade E)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 15
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Civil or Mechanical Engineer W/CRPEP License	1	5	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 100,000/-** *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	1	Dewatering Pumps (6")	1
Loader	1	Water Tankers (5000L)	1
JCB	1	Vacuum Tankers (15000L)	1
Dumping Truck	1	Rollers (up to 5T)	1
Dumping Pick Up	1	Jumping Plate Compactor	1
Hiab (High-up)	1	Service Vehicle	2

- Owned or Leased Basic Plant.

## Prequalification Technical Criteria for Implementation of Sewerage & Drainage & TSE (Grade F)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 15
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Civil or Mechanical Engineer W/CRPEP License	1	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-** . *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 2 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	1	Dewatering Pumps (6")	1
Loader	1	Water Tankers (5000L)	1
JCB	1	Vacuum Tankers (15000L)	1
Dumping Truck	1	Rollers (up to 5T)	1
Dumping Pick Up	1	Jumping Plate Compactor	1
Hiab (High-up)	1	Service Vehicle	1

- Owned or Leased Basic Plant.

## Prequalification Technical Criteria for Rehabilitation of Existing Sewers & Pipe Distribution System

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 50
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Civil Engineer W/CRPEP License	2	10	7
Civil Engineers W/CRPEP License	1	5	3
Safety officer	1	5	5

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Senior Civil Engineers should have Professional Certificate in Rehabilitation of Existing Sewers & Pipe Distribution System or an equivalent approved by Ministry of Works, Municipality Affairs & Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 100,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects ((if the contractor is involved in any project with MOW as a party)).

### 4- Plant & Equipment Owned:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	4	Dewatering Pumps (6")	8
Loader	3	Water Tankers (5000L)	2
JCB	4	Vacuum Tankers (15000L)	2
Dumping Truck	4	Rollers (up to 5T)	2
Dumping Pick Up	4	Jumping Plate Compactor	5
Hiab (High-up)	2	Buses (transportation)	2
Pipe Bursting Machine	1	CCTV Equipment	1
CIPP Cutting Machine	1	Robotic Machine	1
Compressor	2	Air Operated Bursting Hammer	1
Coring Machine	1		

- Owned or Leased Basic Plant.

# Prequalification Technical Criteria for Rehabilitation of Existing Sewers & Pipe Distribution System (International)

## 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

## 2- Organization & Human Recourses:

- Minimum No. of manpower 80
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Civil Engineer	2	10	7
Civil Engineers	1	7	5
Safety officer	2	5	5

- Civil & mechanical Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## 3- Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than BD 1,000,000/-.
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

## 4- Plant & Equipment Owned:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Excavator	4	Dewatering Pumps (6")	8
Loader	3	Water Tankers (5000L)	2
JCB	4	Vacuum Tankers (15000L)	2
Dumping Truck	4	Rollers (up to 5T)	2
Dumping Pick Up	4	Jumping Plate Compactor	5
Hiab (High-up)	2	Buses (transportation)	2
Pipe Bursting Machine	1	CCTV Equipment	1
CIPP Cutting Machine	1	Robotic Machine	1
Compressor	2	Air Operated Bursting Hammer	1
Coring Machine	1		

- Owned or Leased Basic Plant.

-Note: The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for CCTV Surveys Works for Sewerage & Drainage

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Recourses:

- Minimum No. of manpower 10
- Minimum No. of Technical Recourse:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
CCTV Operator	2	5	3
Safety officer	1	5	5

- CCTV Operator should be qualified (Accepted CCTV Training Certificate) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 10,000/-** . *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

### 4- Plant & Equipment Owned:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
CCTV Equipment	1	Traffic Signs	2
Sewer Cleaning Equipment (suction, high pressured)	1	Software for preparing xml file (Data inspection)	2
Safety Tools for Confined Space	2		

- Owned Basic Plant.

\*Note: These Technical Criteria applies for Local & International Contractors.

## Prequalification Technical Criteria for

### Operation, Maintenance, Administration & Management of Sewerage /TSE Pumping Station & Network System (Grade A)

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 50
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Engineer Civil or Mech. w/CRPEP License	1	10	3
Civil Engineer w/CRPEP License	1	4	3
Mechanical Engineer w/CRPEP License	1	4	3
Electrical Engineer w/CRPEP License	1	4	3
Civil Engineering Technician	2	4	3
Mechanical Engineering Technician	4	4	3
Electrical Engineering Technician	2	4	3
Instrument Technician	1	4	3
Chemical Technician	1	4	3
Plant Operator	4	4	3
Safety officer	2	4	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 500,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects ((if the contractor is involved in any project with MOW as a party)).
- The Upgrading will be limited to one grade per an application.

**4 Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator 50 kW	1	High Pressure washer – 4m³ Water & 6 M³ Sludge/5000 psi	1
Pick-up / Service vehicle	3	Water Tanker - 9 m³	1
Mobile crane - Hiab 5 ton1	1	Dewatering pumps 60 L/S	2
Suction Tanker - 9 m³	1	Mobile crane - Hiab 2 ton	1
Welding Machine	1	Air Compressor	1
Workshop, min. 70 square meter	1		

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Operation, Maintenance, Administration & Management of Sewerage /TSE Pumping Station & Network System (Grade A-International)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 70
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Engineer Mechanical	1	10	5
Sr. Civil Engineer	1	10	5
Mechanical Engineer	2	5	3
Electrical Engineer	2	5	3
Civil Engineer	1	5	3
Instrument Engineer	1	5	3
Chemical Engineer	1	5	3
Plant Operator	4	5	3
Safety officer	2	5	3

- All Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 1,500,000/-**.
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 8 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Mobile crane - Hiab 5 ton1	1	High Pressure washer – 4m³ Water & 6 M³ Sludge/5000 psi	1	Workshop, min. 70 square meter	1
Pick-up / Service vehicle	3	Water Tanker - 9 m³	1	Welding Machine	1
Diesel Generator 50 kW	1	Dewatering pumps 60 L/S	2	Air Compressor	1
Suction Tanker - 9 m³	1	Mobile crane - Hiab 2 ton	1		

- Owned Basic Plant

**Note:** The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for

### **Operation, Maintenance, Administration & Management of Sewerage /TSE Pumping Station & Network System (Grade B)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower   30
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Engineer Civil or Mech. w/CRPEP License	1	7	3
Civil Engineer w/CRPEP License	1	4	3
Mechanical Engineer w/CRPEP License	1	4	3
Electrical Engineer w/CRPEP License	1	4	3
Civil Engineering Technician	2	3	3
Mechanical Engineering Technician	1	3	3
Electrical Engineering Technician	1	3	3
Instrument Technician	1	3	3
Chemical Technician	1	3	3
Plant Operator	2	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 200,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum   1   Projects completed in the field of application in the last 3 years.
- Minimum no. of   3   years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

**4 Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator 50 kW	1	Suction Tanker -9 m <sup>3</sup>	1
Pick-up / Service vehicle	3	Water Tanker -9 m <sup>3</sup>	1
Mobile crane - Hiab 2 ton1	1	Dewatering pumps	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### **Operation, Maintenance, Administration & Management of Sewerage /TSE Pumping Station & Network System (Grade C)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower   20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical or Electrical Engineer w/CRPEP License	1	4	3
Civil Engineering Technician	1	3	3
Mechanical Engineering Technician	2	3	2
Electrical Engineering Technician	1	3	2
Instrument Technician	1	3	2
Chemical Technician	1	3	2
Plant Operator	2	3	2
Safety officer	1	3	2

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-** (*The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications*)
- Minimum   1   Project completed in the field of application in the last 3 years.
- Minimum no. of   2   years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

**4 Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator 50 kW	1	Dewatering pumps	1
Pick-up / Service vehicle	2	Mobile crane - Hiab 2 ton1	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Operation, Maintenance, Administration & Management of STP (Grade A)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 50
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Engineer (Civil or Mechanical) w/CRPEP License	1	10	3
Civil Engineer w/CRPEP License	1	4	3
Mechanical Engineer w/CRPEP License	1	4	3
Electrical Engineer w/CRPEP License	1	4	3
Civil Engineering Technician	2	5	3
Mechanical Engineering Technician	3	5	
Electrical Engineering Technician	2	5	
Instrument Technician	1	5	3
Chemical Technician	1	5	3
Plant Operator	4	5	3
Safety officer	2	5	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 500,000/-** . *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field (with more than 50,000 cubic meters per day capacity).
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator - 50 kW	1	Suction Tanker -9 m <sup>3</sup>	1
Pick-up / Service vehicle	3	Water Tanker -9 m <sup>3</sup>	1
Mobile crane - Hiab 2 ton1	1	Dewatering pumps	1
Workshop, min. 70 square meters.	1		

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Operation, Maintenance, Administration & Management of STP (Grade A-International)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 70
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Engineer Mechanical	1	10	5
Sr. Civil Engineer	1	10	5
Mechanical Engineer	2	5	3
Electrical Engineer	2	5	3
Civil Engineer	1	5	3
Instrument Engineer	1	5	3
Chemical Engineer	1	5	3
Plant Operator	4	5	3
Safety officer	2	5	3

- All Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 1,500,000/-**.
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 8 years' experience in the field (with more than 50,000 cubic meters per day capacity).
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator - 50 kW	1	Suction Tanker -9 m <sup>3</sup>	1
Pick-up / Service vehicle	3	Water Tanker -9 m <sup>3</sup>	1
Mobile crane - Hiab 2 ton1	1	Dewatering pumps	1
Workshop, min. 70 square meters.			

- Owned Basic Plant

**Note:** The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for Operation, Maintenance, Administration & Management of STP (Grade B)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 30
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Sr. Engineer Civil or Mech. w/CRPEP License	1	7	3
Civil Engineer w/CRPEP License	1	4	3
Mechanical Engineer w/CRPEP License	1	7	3
Electrical Engineer w/CRPEP License	1	4	3
Civil Engineering Technician	1	3	3
Mechanical Engineering Technician	2	3	3
Electrical Engineering Technician	1	3	3
Instrument Technician	1	3	3
Chemical Technician	1	3	3
Plant Operator	2	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 200,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field (with more than 10,000 up to 50,000 cubic meters per day capacity).
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator - 50 kW	1	Suction Tanker -9 m <sup>3</sup>	1
Pick-up / Service vehicle	3	Water Tanker -9 m <sup>3</sup>	1
Mobile crane - Hiab 2 ton1	1	Dewatering pumps	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Operation, Maintenance, Administration & Management of STP (Grade C)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 25
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical or Electrical Engineer w/CRPEP License	1	4	3
Civill Engineer w/CRPEP License	1	4	3
Civil Engineering Technician	1	3	3
Mechanical Engineering Technician	2	3	2
Electrical Engineering Technician	1	3	2
Instrument Technician	1	3	2
Chemical Technician	1	3	2
Plant Operator	2	3	2
Safety officer	1	3	2

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 2 years' experience in the field (with more than 1,000 up to 10,000 cubic meters per day capacity or any equivalent Experience approved by Ministry of Works, Municipalities Affairs and Planning).
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator - 50 kW	1	Dewatering pumps	1
Pick-up / Service vehicle	3	Mobile crane - Hiab 2 ton1	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### **Overhaul (Motors, Surge Vessels, Generators, Valves, Pumps & Transformers) and Rewinding for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade A)**

#### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

#### 2- Organization & Human Resources:

- Minimum No. of manpower 20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineer w/CRPEP License	1	7	4
Electrical Engineer w/CRPEP License	1	5	3
Mechanical Engineering Technician	3	5	3
Electrical Engineering Technician	3	5	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

#### 3 Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 200,000/-**. (*The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications*)
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

#### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Hi Pot tester	1	Pressure washer	1
Sand blasting facility	1	Varnish tank	1
Curing oven	1	Welding machine	1
Bending machine	1	Painting facility	1
Overhead crane, 5T	1	Lathe machine	1
Workshop (Min 100 sq.m)	1	Balancing Machine	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### **Overhaul (Motors, Surge Vessels, Generators, Valves, Pumps & Transformers) and Rewinding for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade A-International)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineer	1	7	4
Electrical Engineer	1	5	3
Mechanical Engineering Technician	3	5	3
Electrical Engineering Technician	3	5	3
Safety officer	1	3	3

- All Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 200,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

**4 Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Hi Pot tester	1	Pressure washer	1
Sand blasting facility	1	Varnish tank	1
Curing oven	1	Welding machine	1
Bending machine	1	Painting facility	1
Overhead crane, 5T	1	Lathe machine	1
Workshop (Min 100 sq.m)	1	Balancing Machine	1

- Owned or Leased Basic Plant

**Note:**

- The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for

### **Overhaul (Motors, Surge Vessels, Generators, Valves, Pumps & Transformers) and Rewinding for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade B)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower     20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical or Electrical Engineer w/CRPEP License	1	5	3
Mechanical Engineering Technician	2	5	3
Electrical Engineering Technician	2	5	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 100,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum   2   Projects completed in the field of application in the last 3 years.
- Minimum no. of   3   years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

**4 Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Balancing Machine	1	Pressure washer	1
Sand blasting facility	1	Varnish tank	1
Curing oven	1	Welding machine	1
Workshop (Min 80 sq.m)	1	Painting facility	1
Overhead crane, 5T	1		

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### **Overhaul (Motors, Surge Vessels, Generators, Valves, Pumps & Transformers) and Rewinding for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade C)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower     10
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical or Electrical Engineer w/CRPEP License	1	4	3
Mechanical Engineering Technician	1	4	3
Electrical Engineering Technician	1	4	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum   1   Projects completed in the field of application in the last 3 years.
- Minimum no. of   2   years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

**4 Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Balancing Machine	1	Pressure washer	1
Sand blasting facility	1	Varnish tank	1
Curing oven	1	Welding machine	1
Workshop (Min 60 sq.m)	1	Overhead crane, 2T	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### Services and Maintenance of Central Cooling Systems and Chillers, Air Conditioning and Ventilation System for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade A)

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 30
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineer w/CRPEP License*	1	7	4
Electrical Engineer w/CRPEP License	1	5	3
Mechanical Technician *	2	5	5
Electrical Technician	1	5	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Electrical Engineers/Technicians / Wiremen should have a valid License Issued by EDD.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Minimum one Engineer and one Technician must be an authorized certificate holder from the HVAC manufacturers/agencies.

**3- Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 200,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects ((if the contractor is involved in any project with MOW as a party)).
- The Upgrading will be limited to one grade per an application.

**4- Plant & Equipment owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Pressure washer	1	Tig welding machine	1
Air flow meter	1	Vibration meter	1
Welding machine	1	Hydraulic press	1
Steam cleaner	1	Refrigerant recovery machine	1
Air compressor	1	Workshop, min. 70 square meter	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### Services and Maintenance of Central Cooling Systems and Chillers, Air Conditioning and Ventilation System for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade A-International)

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 30
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineer *	1	10	5
Electrical Engineer	1	7	5
Mechanical Engineering Technician *	2	7	5
Electrical Engineering Technician	1	7	5
Safety officer	1	5	3

- All Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Minimum one Engineer and one Technician must be an authorized certificate holder from the HVAC manufacturers/agencies.

**3- Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 500,000/-**.
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 8 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects ((if the contractor is involved in any project with MOW as a party)).
- The Upgrading will be limited to one grade per an application.

**4- Plant & Equipment owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Pressure washer	1	Tig welding machine	1
Air flow meter	1	Vibration meter	1
Welding machine	1	Hydraulic press	1
Steam cleaner	1	Refrigerant recovery machine	1
Air compressor	1	Workshop, min. 70 square meter	1

- Owned or Leased Basic Plant

**Note:** The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for

### **Services and Maintenance of Central Cooling Systems and Chillers, Air Conditioning and Ventilation System for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade B)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower   20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineer w/CRPEP License*	1	7	4
Mechanical Engineering Technician *	2	5	3
Electrical Engineering Technician	1	5	3
Safety officer	1	5	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Electrical Engineers/Technicians / Wiremen should have a valid License Issued by EDD.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Minimum one Engineer and one Technician must be an authorized certificate holder from the HVAC manufacturers/agencies.

**3- Experience :**

- Minimum Completion of one Project in the application field in the last 3 years valued equal more than **BD 100,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum   2   Projects completed in the field of application in the last 3 years.
- Minimum no. of   4   years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects ((if the contractor is involved in any project with MOW as a party)).

**4- Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Pressure washer	1	Refrigerant recovery machine	1
Air flow meter	1	Vibration meter	1
Welding machine	1	Air compressor	1
Steam cleaner	1	Tig welding machine	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### Services and Maintenance of Central Cooling Systems and Chillers, Air Conditioning and Ventilation System for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade C)

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 15
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineer w/CRPEP License	1	5	3
Electrical Engineering Technician	1	5	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Electrical Engineers/Technicians / Wiremen should have a valid License Issued by EDD.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Minimum one Engineer and one Technician must be an authorized certificate holder from the HVAC manufacturers/agencies.

**3- Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects ((if the contractor is involved in any project with MOW as a party)).
- The Upgrading will be limited to one grade per an application.

**4- Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Pressure washer	1	Tig welding machine	1
Air flow meter	1	Vibration meter	1
Welding machine	1	Air compressor	1
Steam cleaner	1	Refrigerant recovery machine	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Electrical Works for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade 1)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower   20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Electrical Engineer w/ CRPEP	2	5	3
Mechanical Engineer w/ CRPEP	1	5	3
Electrical Engineering Technician	2	5	3
Safety officer	2	5	3

- Technicians should be certified (BSc or Diploma Certificate in engineering) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 200,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum   2   Projects completed in the field of application in the last 3 years.
- Minimum no. of   5   years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- Submitting a valid EDD Contractor’s License Grade 1.
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
High Pot Tester	1	Phase sequence tester	1
Insulation resistance tester	1	Generator, 50kW	1
Dewatering pump	1	Workshop, min. 70 square meter	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### Electrical Works for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade 1-International)

#### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

#### 2- Organization & Human Resources:

- Minimum No. of manpower 30
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Electrical Engineer w/ CRPEP	2	10	5
Mechanical Engineer w/ CRPEP	1	7	5
Electrical Engineering Technician	2	7	5
Safety officer	1	7	5

- Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company headquarter country.
- Electrical Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Wiremen should have an approved valid professional certificate & License equivalent to Kingdom of Bahrain wireman EDD License.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

#### 3 Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 500,000/-**.
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 8 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- The Upgrading will be limited to one grade per an application.

#### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
High Pot Tester	1	Phase sequence tester	1
Insulation resistance tester	1	Generator, 50kW	1
Dewatering pump	1	Workshop, min. 70 square meter	1

- Owned or Leased Basic Plant

**Note:** The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## Prequalification Technical Criteria for Electrical Works for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade 2)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 15
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Electrical Engineer w/ CRPEP	1	5	3
Mechanical Engineer w/ CRPEP	1	5	3
Electrical Engineering Technician	2	5	3
Safety officer	1	5	3

- Technicians should be certified (BSc or Diploma Certificate in engineering) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3 Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 100,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- Submitting a valid EDD Contractor's License Grade 2.
- The Upgrading will be limited to one grade per an application.

### 4 Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
High Pot Tester	1	Phase sequence tester	1
Insulation resistance tester	1	Generator, 50kW	1
Dewatering pump	1	Hiab	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Electrical Works for TSE /STP, Sewerage Pumping Stations & Network Systems (Grade 3)

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 15
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Electrical Engineer w/ CRPEP	1	4	3
Electrical Engineering Technician	2	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience :

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3years.
- Minimum no. of 2 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).
- Submitting a valid EDD Contractor’s License Grade 3.
- The Upgrading will be limited to one grade per an application.

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Insulation resistance tester	1	Generator, 50kW	1
Service vehicle	1	Hiab	1

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### **General Upgrading/Refurbishment Works of Pumping Stations, Sewage Treatment Plants, T.S.E. Pumping Stations/Reservoirs, Over pumping Works and General Sewage Cleaning**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 30
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Civil Engineer w/CRPEP License	1	5	3
Electrical or Instrument Engineer w/CRPEP License	1	5	3
Mechanical Engineer w/CRPEP License	1	5	3
Civil Engineering Technician	1	5	3
Mechanical Engineering Technician	1	5	3
Electrical or Instrument Technician	2	5	3
Safety officer	1	5	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 400,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 5 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

**4 Plant & Equipment Owned:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator 50 kW	1	Hydraulic jack	1	Core Drilling Machine	1
Pick-up / Service vehicle	5	Water Tanker -9 m³	1	Jack hammer	1
Mobile crane - Hiab 5 ton1	1	Dewatering pumps 60 L/S	2	Workshop, 70 square meter	1
Suction Tanker -9 m³	1	Mobile crane - Hiab 2 ton	1	Roller vibrator	1
Welding Machine	1	Air Compressor	1	Excavator	1
Vibrating compactor	1	Dump Truck	1		

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### **General Upgrading/Refurbishment Works of Pumping Stations, Sewage Treatment Plants, T.S.E. Pumping Stations/Reservoirs, Over pumping Works and General Sewage Cleaning (International)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 80
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Civil Engineer	2	7	5
Electrical Engineer	2	7	5
Mechanical Engineer	3	7	5
Instrument Engineer	2	7	5
Safety officer	2	5	3

- Civil & mechanical Engineers should be certified (BSc Certificate in the engineering field) and Licensed (CRPEP equivalent) as Engineers in their company's headquarter country.
- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning, and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning

**3 Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 1,000,000/-**.
- Minimum 3 Projects completed in the field of application in the last 3 years.
- Minimum no. of 7 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

**4 Plant & Equipment Owned:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Diesel Generator 50 kW	1	Hydraulic jack	1	Core Drilling Machine	1
Pick-up / Service vehicle	5	Water Tanker -9 m³	1	Jack hammer	1
Mobile crane - Hiab 5 ton1	1	Dewatering pumps 60 L/S	2	Workshop, 70 square meter	1
Suction Tanker -9 m³	1	Mobile crane - Hiab 2 ton	1	Roller vibrator	1
Welding Machine	1	Air Compressor	1	Excavator	1
Vibrating compactor	1	Dump Truck	1		

- Owned Basic Plant

**Note:**

- The Contracting Company should be (ISO 9001:2015) certified or with an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.

# Prequalification Technical Criteria for Instrumentation, Electronic Control and SCADA System for Sewerage Pumping Station, STP & TSE Plant

## 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

## 2- Organization & Human Resources:

- Minimum No. of manpower 10
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Instrument or Control Engineer w/CRPEP License	1	5	3
Instrument or Control or Electrical or Electronics Engineering Technicians	2	5	3
Safety officer	1	5	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

## 3- Experience:

- The company shall have experience in design, installation, test and commissioning works in PLC switch gear and interfacing works.
- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-**. *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

## 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Calibration devices	1	Insulation tester	1
Simulator	1	Instrumentation test tools	1 set
General tools & Testing devices and measurement devices for electrical / instrumentation			Min. 1 per each

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for Gully Cleaning, rodent control and emergency over pumping for Sewerage Pumping Station, STP & TSE plants.

### 1- Eligibility:

- Covered in CED Pre-Qualification Application Requirements.

### 2- Organization & Human Resources:

- Minimum No. of manpower 20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineering Technician	2	3	3
Electrical Engineering Technician	1	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety "completing IGC1, IGC2 & IGC3") or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

### 3- Experience:

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-**. (*The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications*)
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years' experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

### 4- Plant & Equipment Owned/ Leased:

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Mobile crane	1	Trolley jetter 500 Liter psi	1
Mobile diesel pump 6"	4	Cleaning grabs	20
Mobile diesel pump 8"	2	Sewage suction tanker (Min 9 m <sup>3</sup> )	1

- Owned or Leased Basic Plant.

## Prequalification Technical Criteria for

### **Cleaning Services (Tank Desilting & Cleaning, Emptying & Replacing Skip Buckets at General Cleaning Works Including Sludge Transportation for Sewerage Pumping Station, STP and TSE Plants)**

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 20
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Engineer Civil or Mechanical Technician	1	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in engineering) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3”) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3- Experience :**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-** . *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 1 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

**4- Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
40 Tons trucks	2	Suction tanker	2
20 Tons Trucks	2	Jetting tankers	2

- Owned or Leased Basic Plant

## Prequalification Technical Criteria for

### Pipe jetting works for Sewerage Pumping Station, STP & TSE plants

**1- Eligibility:**

- Covered in CED Pre-Qualification Application Requirements.

**2- Organization & Human Resources:**

- Minimum No. of manpower 15
- Minimum No. of Technical Resource:

Technical Staff Specialty	Minimum No. Required	Minimum No. of Years of overall Experience Required (per Each)	Minimum No. of Years of Experience in the Application Field Required (for each)
Mechanical Engineering Technician	2	3	3
Electrical Engineering Technician	1	3	3
Safety officer	1	3	3

- Technicians should be certified (BSc or Diploma Certificate in the engineering field) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning.
- Safety Officer should have Certificates (Managing Safety from IOSH or NEBOSH international General Certificate in occupational Health & Safety “completing IGC1, IGC2 & IGC3) or an equivalent approved by Ministry of Works, Municipalities Affairs and Urban Planning and a confined spaces entry & rescue certificate approved by Ministry of Works, Municipalities Affairs and Urban Planning.

**3- Experience:**

- Minimum Completion of one Project in the application field in the last 3 years valued equal or more than **BD 50,000/-** . *(The single largest project requirement is mandatory for New & Upgrading prequalification applications and optional for renewal Prequalification applications)*
- Minimum 2 Projects completed in the field of application in the last 3 years.
- Minimum no. of 3 years’ experience in the field of application.
- Satisfactory performance appraisal of the ongoing or completed MOW Projects (if the contractor is involved in any project with MOW as a party).

**4- Plant & Equipment Owned/ Leased:**

Name of the Equipment	Min. no. required	Name of the Equipment	Min. no. required
Large high Pressure washer -4 m³ Water & 6 m³ Sludge/5000 psi	1	Sewage suction tanker (Min 9 m³)	1
Small mobile high Pressure washer - 500 L Water 2000 psi	1	Water tanker (Min 9 m³)	1

- Owned or Leased Basic Plant

## **Overview of Ratios adopted for Pre-qualification**

### **Four Major Categories of Financial Ratios:**

1. Liquidity
2. Profitability Sustainability
3. Operational Efficiency
4. Leverage

#### **A. Liquidity Ratios**

An important indication of financial health and whether the company has enough cash on an ongoing basis to meet operational obligations.

##### **1. Current Ratio**

Measures the ability to meet short term obligations, a useful indicator of cash flow in the near future. Ratio between 1.20 and 2.0 is generally considered sufficient while Ratio less than 1.0 indicates liquidity issues.

##### **2. Quick Ratio**

Indicates liquid assets that can be quickly converted to cash. Ratio of 1:1 means that the enterprise can pay its bills without having to sell inventory.

##### **3. Working Capital**

Indicates current assets over current liabilities required as working capital for operations of the company.

#### **B. Profitability Sustainability Ratios**

##### **1. Gross Profit Margin**

Enough gross profit is required to cover indirect costs and to plough back retained earnings for working capital needs and growth.

##### **2. Net Profit Margin**

Measures the ability to cover all operating costs including indirect costs.

##### **3. Return on Assets**

Indicates efficiency of operating assets. A low ratio compared to industry may mean that competitors have found a way to operate more efficiently.

##### **4. Return on Equity**

This is one of the important ratios to investors. This ratio indicates profit to compensate for the risk of being in business.

#### **C. Operational Efficiency Ratios**

Indicate efficiency of utilization of assets and managing liabilities. These ratios are used to compare performance over multiple periods.

##### **1. Accounts Receivable Turnover (expressed in "Days in Accounts Receivable")**

Indicates number of times trade receivables is turned over during the year, The higher the turnover, the shorter the time between sales & collecting cash.

##### **2. Days in Inventory**

Indicates efficiency of inventory turnover, A high ratio indicates inventory is selling quickly and little unused inventory is being stored. Low ratio suggests overstocking, obsolete inventory or there are selling issues.

### 3. Total Asset Turnover

Indicates efficiency of business to generate sales on each \$ of assets. Increasing ratio indicates assets being used more productively.

### **D. Leverage Ratio**

It indicates the level of borrowed money utilization by an enterprise and its associated risk of liquidity crunch in case of reduced profitability.

#### 1. Debt to Equity

Recommended ratio by practice is to maintain 2:1 (*i.e. Debt can be twice that of equity as a limiting factor*).

#### 2. Gearing Ratio

Indicates the extent of financial leverage the company has in terms of borrowed funds versus equity. Higher ratio when economy & company is sound, provides high profit margin, and when there is down turn in economy & company goes through downslide of margin, higher gearing ratio can lead the company to bankruptcy.

### **Assumptions in recommended Financial Ratios**

1. Analysis is done for the last 3 years Audited Financial Statements (AFS) with the following weightage:

- Latest AFS - 70%
- Previous to latest AFS - 20%
- Last AFS - 10%

### **There will be 2 Stages of Financial Evaluation**

- 1<sup>st</sup> Stage (Pass or Fail marks)  
\* *Contractors with less than 75 points will be rejected in Grade category applied for*
- 2<sup>nd</sup> Stage (must get at least 75 points in the 1<sup>st</sup> Stage).
- Overall Score is the average of the points in the 1<sup>st</sup> & 2<sup>nd</sup> Stage.

### **Weightage Points for 1<sup>st</sup> Stage Evaluation (Pass or Fail):**

- Working Capital = 30 points
- Net Worth = 30 points
- Current Ratio = 20 points
- Quick Acid Test Ratio = 20 points
- **Total Mark = 100 Points**

- If minimum Working Capital, Net Worth, Current Ratio & Quick Acid Test Ratio requirements are met, Contractor gets the assigned weightage points;
- If there is a shortfall on the minimum requirement, the Contractor gets ZERO on said criteria.

2. Weightage Points for 2<sup>nd</sup> Stage Evaluation:

- Turnover - 14 points
- Working Capital to Total Assets - 7 points
- Leverage Ratios - 21 Points  
(Gearing, Debt to Equity & Total Liabilities to Total Assets Ratios)
- Gearing, Debt to Equity & Total Liabilities to Total Assets Ratios - 7 points each
- Operational Efficiency Ratios - 20 points  
(Assets & Inventories Turnovers, Account Receivables Turn over)
- Assets and Inventories Turnovers - 5 points each
- Accounts Receivables Turnover - 10 points
- Profitability Sustainability Ratios - 38 points  
(Return on Equity & Return on Assets, Gross Profit Margin & Profit Margin)
- Return on Equity & Return on Assets - 7 points each
- Gross Profit Margin & Profit Margin - 12 points each

3. Recommended Standardization of Benchmark & Full Implementation is 3 years, considering current economic situation & the number of contractors who would be able to qualify the pre-qualification criteria.

Proposed Step Incremental Benchmarking:

- Year 1 - 10% increase to the base figures
- Year 2 - 10% increase to the figures in year 1 of implementation.
- Year 3 - 10% increase to the figures in year 2 of implementation.

4. Overall Score will be classified as follows:

- Excellent = **above 90 points**
- Good = **75 points - 90 points**
- Average = **55 points - 74.99 points**
- Poor = **below 55 points**

5. Financial Evaluation Considerations:

- Contractors applying for New registration or Upgrade the prequalification license need to have at least **“Good”** Overall Score.
- Contractors with **“Average”** score can be consider only for prequalification license renewal applications.
- Audited Interim Financial Report for the ongoing financial/fiscal year can be taken in consideration for the first stage of the evaluation to measure the enhancement, if the last three years annual audited financial reports weighted average is not meeting the minimum benchmark required for the desired Category/Grade. This will only be consider for the financial evaluation first stage for prequalification license renewal applications and the overall financial evaluation will be consider **“Average”** regardless to the marks sum, The prequalification license in this case

is subjected to the company providing its latest Audited Annual financial report no later than one year from its current Prequalification license issuing date to re-evaluate company's financial status and confirm its compliance & suitability to the licensed Category/Grade Financial criteria requirements. *(Failing to submit the above details the prequalification license will be canceled, and the company will have to submit new prequalification application.)*

- If the last three years annual audited financial reports weighted average is not meeting the minimum benchmark required for the desired Category/Grade, the evaluation can be consider only the last year audited report ratios & values if it reflect an enhancement in the company's financial capacity and meets the minimum benchmark required for the desired Category/Grade, this will only be consider for the financial evaluation first stage for prequalification license renewal applications and the overall financial evaluation will be consider "Average" regardless to the marks sum, The prequalification license in this case is subjected to the company providing its latest Audited Annual financial report no later than one year from its current Prequalification license issuing date to re-evaluate company's financial status and confirm its compliance & suitability to the licensed Category/Grade Financial criteria requirements. *(Failing to submit the above details the prequalification license will be canceled, and the company will have to submit new prequalification application.)*

6. It is advised for the concerned parties to conduct a financial evaluation for the participant contractors in Tenders for the following conditions:

- If the contracting company is being, involve in several ongoing projects (more than a project at the same time) while tendering for a Ministry project(s).
- If the Contractor financial evaluation result during the prequalification process were, consider or result as "**Average**".
- If the project is highly valued (more than 10 Million) and/or with high technical complexity such as but not limited to (GCC fund project or major strategic projects that are mainly allocated for the top classified contractors (grade AA for the Main categories and grade A for the specialized categories were there is no Maximum value limit for participation).

**MINISTRY OF WORKS, MUNICIPALITIES AFFAIRS &**  
**URBAN PLANNING**

**PREQUALIFICATION FINANCIAL CRITERIA**

## Financial Criteria for Implementation of Sewerage & Drainage

Category	Grade	Financial Limit per Project (BD)	Minimum Net Worth (Total Equity) (BD) (75% of Turnover)	Minimum Working Capital (BD) (35% of Turnover)	Minimum Annual Turnover (BD)
Implementation of Sewerage & Drainage Projects	AA	Over 2,500,000	2,250,000	1,050,000	3,000,000
	A	Up to 2,500,000	1,875,000	875,000	2,500,000
	B	Up to 1,500,000	1,125,000	525,000	1,500,000
	C	Up to 1,000,000	750,000	350,000	1,000,000
	D	Up to 500,000	375,000	175,000	500,000
	E	Up to 250,000	187,500	87,500	250,000
	F	Up to 100,000	75,000	35,000	100,000
CCTV Works	Pass or Fail	Non	112,500	52,500	150,000
Rehabilitation	Pass or Fail	Non	1,875,000	875,000	2,500,000

Category	Grade	Financial Limit per Project (BD)	Minimum Net Worth (Total Equity) (BD) (75% of Turnover)	Minimum Working Capital (BD) (35% of Turnover)	Minimum Annual Turnover (BD)
Implementation of Sewerage & Drainage Projects (International)	AA	Over 2,500,000	15,000,000	7,000,000	20,000,000
CCTV Works	Pass or Fail	Non	750,000	350,000	1,000,000
Rehabilitation	Pass or Fail	Non	15,000,000	7,000,000	20,000,000

## Financial Criteria for Operation and Maintenance of Sewerage & Drainage

Category	Grade	Financial Limit per Project (BD)	Minimum Net Worth (Total Equity) (BD) (75% of Turnover)	Minimum Working Capital (BD) (35% of Turnover)	Minimum Annual Turnover (BD)
Operation, Maintenance, Administration & Management of Sewerage /TSE Pumping Stations & Network Systems	A	Over 500,000	750,000	350,000	1,000,000
	B	Up to 500,000	375,000	175,000	500,000
	C	Up to 200,000	150,000	70,000	200,000
Operation, Maintenance, Administration & Management of STP	A	Over 500,000	750,000	350,000	1,000,000
	B	Up to 500,000	375,000	175,000	500,000
	C	Up to 200,000	150,000	70,000	200,000
Overhaul and rewinding for TSE /STP, Sewerage Pumping Stations & Network Systems	A	Over 200,000	187,500	87,500	250,000
	B	Up to 200,000	150,000	70,000	200,000
	C	Up to 100,000	75,000	35,000	100,000
Services and Maintenance of Central Cooling for TSE /STP, Sewerage Pumping Stations & Network Systems	A	Over 200,000	187,500	87,500	250,000
	B	Up to 200,000	150,000	70,000	200,000
	C	Up to 100,000	75,000	35,000	100,000
Electrical works for TSE /STP, Sewerage Pumping Stations & Network Systems	1	Over 200,000	187,500	87,500	250,000
	2	Up to 200,000	150,000	70,000	200,000
	3	Up to 100,000	75,000	35,000	100,000

<b>Category</b>	<b>Grade</b>	<b>Financial Limit per Project (BD)</b>	<b>Minimum Net Worth (Total Equity) (BD) (75% of Turnover)</b>	<b>Minimum Working Capital (BD) (35% of Turnover)</b>	<b>Minimum Annual Turnover (BD)</b>
General Upgrading/ Refurbishment Works of Pumping Stations, STP & T.S.E.	Pass or Fail	Non	375,000	175,000	500,000
Gully Cleaning, rodent control and emergency over pumping for Sewerage	Pass or Fail	Non	150,000	70,000	200,000
Instrumentation, Electronic Control and SCADA System	Pass or Fail	Non	187,500	87,500	250,000
Cleaning services for Sewerage Pumping Station, STP and TSE plants	Pass or Fail	Non	150,000	70,000	200,000
Pipe jetting works	Pass or Fail	Non	150,000	70,000	200,000

<b>Category</b>	<b>Grade</b>	<b>Financial Limit per Project (BD)</b>	<b>Minimum Net Worth (Total Equity) (BD) (75% of Turnover)</b>	<b>Minimum Working Capital (BD) (35% of Turnover)</b>	<b>Minimum Annual Turnover (BD)</b>
Operation & Maintenance, Administration & Management of STP or Pumping Stations & Network Systems (International)	A	Over 500,000	7,500,000	3,500,000	10,000,000

Category	Grade	Financial Limit per Project (BD)	Minimum Net Worth (Total Equity) (BD) (75% of Turnover)	Minimum Working Capital (BD) (35% of Turnover)	Minimum Annual Turnover (BD)
<b>Overhaul</b> and rewinding for TSE /STP, Sewerage Pumping Stations & Network Systems and <b>Services</b> and Maintenance of Central Cooling for TSE /STP, Sewerage Pumping Stations & Network Systems (International)	A	Over 200,000	750,000	350,000	1,000,000
All Operation & Maintenance specialized categories (Pass or fail categories) (International)	Pass or Fail	Non	750,000	350,000	1,000,000
Electrical Works (International)	1	Over 200,000	750,000	350,000	1,000,000