TERMS OF REFERENCE (TOR)

For

HIRING OF CONSTRUCTION FIRM FOR INSTALLATION OF ROOFTOP RAINWATER HARVESTING SYSTEMS (RWHS) AT HOUSEHOLD LEVEL IN SELECTED AREAS OF ISLAMABAD AND RAWALPINDI ON ENGINEERING, PROCUREMENT AND CONSTRUCTION (EPC) BASIS

1. BACKGROUND

Rawalpindi and Islamabad Capital Territory, often referred to as the "twin cities" are currently facing serious water related issues such as poor water supply, sanitation, and hygiene which contribute directly to high levels of childhood stunting and undermining human development. Women and children are the most vulnerable, especially in poor residential neighborhoods where sanitation is particularly inadequate and most water supplies are contaminated.

WWF-Pakistan is working on an Australia funded project titled 'Australia-Pakistan Water Security Initiative'. The project aims to improve access to safe water and sanitation services in two disadvantaged urban communities in Islamabad and Rawalpindi in order to have safer and more reliable access to water and sanitation services, particularly for women, children and other financially vulnerable groups.

2. OBJECTIVE OF THE ASSIGNMENT

The major objective of the assignment is to engage a Construction Firm for the establishment of Rainwater Harvesting Systems (RWHS) at household level in order to provide supplementary water source to selected communities. The Firm would be responsible to ensure that the installed RWHS at household level will deliver on performance, reliability and operational parameters.
The firm shall be fully responsible to assure the desired quality of all materials purchased, labor engaged, specifications given and physical works to be carried out under the contract. Any materials, labor, specifications or the physical works found deviating from the agreed standards, during or till one year of the delivery of work, shall be deemed to be the fault of the vendor, for which he will be liable to make necessary corrections and repair.

3. SCOPE OF WORK

The scope of services for the Firm shall be as follows;

The Firm shall install and commission two hundred (200) RWHS at household level in total, mainly hundred (100) in Farash Town, Islamabad and hundred (100) in James Town, Adiala Road, Rawalpindi at proposed locations (by WWF-Pakistan) and capacities with respect to households.

Typical Design

- Typical Designs
- Typical Engineer's Estimate and Bill of Quantities (BOQ) / Cost estimation

Installation & Commissioning

- Procurement and installation of state-of-the-art household rainwater harvesting systems (including all civil & plumbing works) as per the detailed design
- High quality pipes/equipment is required
- Core cutting machine may be required for some households
- Complete commissioning of household RWHS
- Training of relevant persons for proper operation

Other Requirements

- Under the contract, the firm is completely bound not to assign or sub contract any of the activities prescribed herein the contract to any one, not mentioned earlier in the contract and without prior permission of WWF-Pakistan

4. EQUIPMENT SPECIFICATION

The equipment specification list is provided below;

Component/Equipment	Material/Specification	Quantity (per household)	Unit	Unit Rate[1] (PKR)	Total Amount (PKR)
Water Storage Tank – Capacity 1000 liters / 250 US Gallons	PE/Master or Equivalent (6 layers food grade) Proper certifications will be submitted by the Firm.	200	No.		
Drainpipes (gutters / downspouts)	UPVC / medium Class B (4" Dia.) / Master or equivalent	14,000 (1,100 lengths)	Rft.		
Stand	Iron stand / red oxide premier with coating of black paint (Circular stand with height 2.5 ft and dia 40 inch) Iron stand sheet: 16-gauge sheet with angle	200	No.		

[1] **The cost is exclusive of all tax**

	cross on top Suggested angle: 1.5 inches with 6mm thickness				
Fine Sieve	Stainless steel at the inlet of every downspout/drainpipe / 25 mm / 1" Sieve Size	400	No.		
Elbows 90^{o}	UPVC, Sch 40 (4" Dia.) / Master or equivalent	2,000	No.		
Elbows 45^{o}	UPVC, Sch 40 (4" Dia.) / Master or equivalent	1,000	No.		
Elbow M/F	UPVC, Sch 40 (4" Dia.) / Master or equivalent	1,000	No.		
Equal Tee	UPVC, Sch 40 (4" Dia.) / Master or equivalent	200	No.		
UPVC Binding Solutions	1/2 kg Box	120	No.		
Clamps	MS Galvanized - 4"	1,800	No.		
Nails/Screw	Steel / 2" Length	3,600	No.		
Flat Washers/Rawal	Steel	3,600	No.		
Sockets	UPVC, Sch 40 (4" Dia.)	400	No.		
Tap	Plastic / Stainless steel	200	No.		
Cleanout	UPVC, Sch 40 (4" Dia.) / Master or equivalent	200	No.		
Labor / Installation Cost	Lump sum	Lump sum			

- The average size of each household is **3 Marlas**
- Complete plumbing and installation of pipes including elbows, equal tees, sockets, clamps, binding solution, and any other necessary item
- The financial proposal must contain unit cost of **each item mentioned above**
- Payment will be according to actual installation

5. DELIVERABLES

The following deliverables shown in the table below shall be submitted by firm for completion of Project. The timelines of the project deliverables are stringent and non-negotiable.

Sr. No.	Deliverable
1.	Typical Design Report (conceptual/typical designs)
2.	Complete cost estimation
3.	Procurement list of all materials with name, specifications, company
4.	Project Completion Report (as built drawing and complete pictures of facility)

6. PERIOD OF CONTRCAT

The duration of complete work & report submission is five (05) months including both sites.

7. REQUIRED QUALIFICATION

- The Firm must be registered with the Pakistan Engineering Council (PEC)
- Minimum 05 years of experience in providing General Civil Works.
- Be able to demonstrate working ability under the COVID-19 (Corona Virus) circumstances as per the construction works guidelines issued by the Government of Pakistan
- Should be able to follow all the required Health, Safety and Environmental (HSE) protocols, as specified under the WWF-Pakistan HSE safeguard policy
- Should be able to comply with all the national and provincial construction standards and labor protocols

8. PROPOSAL SUBMISSION REQUIREMENT

- Technical proposal with a brief on rainwater harvesting systems
- Financial proposal with rates and total cost of work which is to be filled in the table provided above against the given quantities (Cost must be exclusive of all taxes)
- Profile of firm

Kindly submit the proposal in a sealed envelope to:

Zahid Sultan Jadoon
Director Operations
WWF-Pakistan
Inside Ali Institute of Education, Ferozepur Road, Lahore.

For any queries, please write to wwfadmin@wwf.org.pk and copy to fanadeem@wwf.org.pk, shrizvi@wwf.org.pk and habbasi@wwf.org.pk .

Schematic Diagram of typical Rooftop Rainwater Harvesting System