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Rural Water Supply Scheme:
Summary Cost and Scope Norms for the Preparation of UPPF Projects

Notes: A) Indicative project sizes, capital values and preparation scopes have been utilised - in reality there will be variations and a standard project preparation template is not possible. B) Project Capital Value is inclusive of all project costs (e.g. project preparation fees, engineering design fees, construction supervision and construction costs). C) Preparation management is at 15% because of a high ratio of complexity relative to the cost of project preparation / diseconomies of scale (i.e. small preparation budgets vs implementation budgets but high complexity).

Disclaimer: Whilst these toolkits have been made available by UPPF for external consumption, including use in support of the CIDB's 'Gateway' process for preparing infrastructure projects, it is emphasized that these toolkits are a work-in-progress and should not be used in a prescriptive fashion. UPPF will update these toolkits from time to time based on experience gained in preparing specific projects. Any suggestions for improvements or refinements should be emailed to UPPF / PPT for the attention of the National Co-ordinator on pptrust@worldonline.co.za

General UPPF Assumptions: 1) Contract and / or Tender Documentation for project implementation is an additional activity / service provided on request; 2) The intensity of the scope of work outlined below has generally been kept to the minimum necessary to determine: a) the viability of the project and b) a preliminary concept and rough estimate for construction / implementation. The limited budgets typically available for preparing projects have also been taken into consideration.3) Professionals / companies who undertake preparation work will also be eligible to tender for implementation work. Should this not be the case, then it is likely that there will be an additional cost premium given the reduced potential for professionals to earn profit.

Description: RDP level of service (basic) water supply to 1 or 2 villages as a single scheme. Typical capital costs can be expected to range from R6,0 to R12,0 million.

Assumptions:
Minimum Project Capital Value (R): 6,000,000
Maximum Project Capital Value (R): 15,000,000

Preparation Scope:	Professional	days (min)	days (max)	rate	budget excl. VAT (min)	budget excl. VAT (max)
Preliminary Assessment						
Preliminary Assessment: To confirm project basics and idenitfy any early risks to be assessed further in the next stage, to confirm municipal buyin and support and to clarify perspective of capital funder in relatioin to the project to be packaged.	Project Manager or Civil Engineer	2	3	6,800	13,600	20,400
Travel					2,000	2,000
				Subtotal 1 - Prelim -Ass	**15,600**	**22,400**
Pre-Feasibility (CIDB 'Assessment') *(USUALLY PART OF FEASIBILITY)*						
Water demand assessment / Situational Analysis: determination of beneficiary population and other relevant demographic data, existing water supply, and expected growth rates and required service level. Calculation of water demand scenarios. Includes assessing institutional arrangements, sustainability and socio economic analysis	Civil Engineer	2	3	6,800	13,600	20,400
Ground water resource assessment: Detailed investigation and evaluation of groundwater potential for water supply, including recommmendations for siting of production boreholes and cost estimates	Geohydrologist	0	2	6,800	0	13,600

Surface water resource assessment: Deatiled assessment and evaluation of recommended surface water source/s, including technical abstraction recommendations	Hydrologist	0	2	6,800	0	13,600
Geotechnical investigations: Evaluation of ground conditions for reservoir positions, pipeline trenches, i.t.o. excavatability (hard rock) and suitability of in-situ material for pipe bedding	Geologist	2	3	8,400	16,800	25,200
Geotechnical samples and tests: for reservoir positions, pipeline trenches etc.	Geotech Lab	na	na	na	5,000	20,000
Development and evaluation of alternative water supply options / scenarios: Engineering viability, sustainability, level of service and decision on preferred option(s)	Civil Engineer	1	3	6,800	6,800	20,400
Social Facilitation: Including initial meetings and ongoing communication	Social Facilitator	2	6	2,400	4,800	14,400
Prefeasibility report	Civil Engineer	1	1.5	6,800	6,800	10,200
	Subtotal 1 - Pre-Feasibility				**53,800**	**137,800**
Feasibility Study (CIDB 'Concept')						
Conceptual design for scheme including source development, abstraction, bulk transfer (weirs, spring protection, pumps, rising mains, gravity mains), water treatment, bulk and balancing storage, reticulation pipeline and tapstands.	Civil Engineer	3	8	6,800	20,400	54,400
Logistical assessment & plan: logistics and plan for implementation (e.g. material supplies, transport, road access etc).	Civil Engineer	0.5	1	6,800	3,400	6,800
EPWP / local job creation: plan for creation of local skills development and work opportunities	Civil Engineer	0.5	0.5	6,800	3,400	3,400
Institutional and Social Input: Demographic profile; community participation and consultation; EPWP / local job creation: plan for creation of local skills development and work opportunities	Social Facilitator	5	8	2,400	12,000	19,200
Preliminary environmental assessment: to determine if a listed activity is triggered	Environmental consultant	1.5	2.5	4,000	6,000	10,000
Basic enviromental Assessment required to determin enviormental impact	Environmental consultant	0	20	4,000	0	80,000
Environmental Impact Assessment (EIA): (Additional cost to basic assessment))	Environmental consultant	0	15	4,000	0	60,000
Specialist Reports: for Enviromental approvals	Environmental consultant/Specialist	0	7	4,000	0	28,000
Implementation Estimates & Programme: Estimates for capital costs; operation and maintenance costs (10 to 15 year life span), financial viability and socio economic analysis + detailed programme (timetable) for implementation.	Civil Engineer	2	3	6,800	13,600	20,400
Final report	Civil Engineer	1	1.5	6,800	6,800	10,200
			Subtotal 2 - Feasibility		**65,600**	**495,200**
Funding Application						
MIG/MIS Application (Registration) Form	Civil Engineer	0.5	1	6,800	3,400	6,800
	Subtotal 3 - Funding Application				**3,400**	**6,800**
	Combined Subtotal 4 (all stages)				**138,400**	**662,200**
	Preparation management at 15%				20,760	99,330
	Travel & minor disbursements at 7.5%				10,380	49,665
	Subtotal 5				**169,540**	**811,195**
	Contingencies at 5%				8,477	40,560
	Total preparation budget				**178,017**	**851,755**
	Total Preparation costs as a percent of total project cost (including capital)				3.0%	5.7%