QUEZON II ELECTRIC COOPERATIVE, INC.

Brgy, Gumian, Infanta, Quezon
Tel. Nos. (042) 535-2265 • (042) 536-3406

INVITATION TO BID

The Quezon II Electric Cooperative, Inc. (QUEZELCO II), through its Bids and Awards Committee (BAC), invites contractors registered with and classified by the Philippine Contractors Accreditation Board (PCAB) to apply for eligibility and to be found eligible to bid for the hereunder contract:

Contract No. 05-2019

Name of Project: Supply of labor and materials for the Expansion of Electric Distribution Line for SEP 2019 (9 Sitios) in Real, Panukulan, Gen. Nakar and Jomalig, Quezon

Approved Budget for the Contract:
For Electric Distribution Line : Php. 10,879,614.81
For Housewiring Installation : Php. 697,136.13
Total Approved Budget for the Contract (ABC) - Php. 11,576,750.94
Location: Brgy. Bagong Silang, Real, Brgy. San Marcelino, Gen. Nakar, Brgy. Bato, Panukulan and Brgy. Apad, Jomalig, Quezon province
Source of Fund: 2019 SEP Subsidy
Target Date of Completion: within 90 calendar days upon receipt of Notice to Proceed
The complete schedule of bidding activities are as follows:

SCHEDULE	DATE & TIME	VENUE
Publication of Invitation to Bid	July 4, 2019	Philippine Daily Inquirer Website: www.quezelco2.com.ph NEA Website: www.nea.gov.ph
Pre-bid Conference	July 11, 2019/10:00 A.M.	Board Room, QUEZELCO II, Main office, Brgy. Gumian, Infanta, Quezon
Opening of Bids	July 23, 2019/10:00 A.M.	Boardroom, QUEZELCO II, Main office, Brgy. Gumian, Infanta, Quezon
Post-Qualification Period	Last week of July	Lowest Bidder's Project Site

Note: Pertinent information may be downloaded at QUEZELCO II website: www.quezelco2.com.ph
For further inquiries you may call the BAC at CP No. 09188073468 or at Tel. No. (042) 536-3406.

A complete set of Bidding Documents may be purchased by the interested Bidders from the above address starting July 5, 2019 up to July 12, 2019, upon payment in cash of a nonrefundable fee of **Php. 12,000.00.**

To qualify, interested bidders must submit the certified true copy in case of photocopied documents such as but not limited to: Company profile: Notarized statement in matrix form of all ongoing and completed government and private contracts (supported with purchase orders, job orders, etc.) including contracts awarded but not yet started, if any **(for the last five years).** Statement identifying the bidder's single largest completed contract similar to the contract to be bid within the relevant period as provided in the bidding documents with a value of at least 50% of the ABC (supported w/ contract, cert. of completion, project cost & cert. of acceptance), Copy of By-laws, Notarized statement of availability of key personnel and equipment, Notarized statement that prospective bidder is not blacklisted by any government or non-government agency; DTI Business Name registration or SEC registration certificate; Audited Financial Statements stamped received by the BIR for the immediately preceding year; Certificate of BIR Registration; Valid PCAB License Specialize in Electrical Works; Valid and current Mayor's Permit and Taxpayer's Identification Number.

All particulars relative to the bidding process shall be governed by the pertinent provisions of the Revised Procurement Guidelines and Simplified Bidding Procedures for Electric Cooperatives - IRR-RA10531 (2017) and Republic Act 9184.

QUEZELCO II reserves the right to accept or reject any bid to annul the bidding process and to reject all bids at any time prior to contract award without thereby incurring any liability to the affected bidder or bidders.

QUEZELCO II assumes no responsibility whatsoever to compensate or indemnify bidders for any expenses incurred in the preparation of their bids.

MA. LUISA A. AVILA
BAC Chairperson

Noted by:

VICTOR R. CADA
General Manager

QUEZON II ELECTRIC COOPERATIVE, INC.

Brgy. Gumian Infanta, Quezon

BIDDING FOR THE SUPPLY OF MATERIALS AND LABOR FOR THE EXPANSION OF ELECTRIC DISTRIBUTION LINE IN TWENTY (20) SITIOS OF INFANTA, REAL, GEN. NAKAR, & POLILLO, QUEZON

FUNDING ALLOCATION 2013 SEP-BATCH 1

MUNICIPALITY	BARANGAY	SITIO	ELECTRIC DISTRIBUTION LINE			HOUSEWIRING			OVER-ALL PROJECT COST
			Material Cost	Labor Cost	Total Cost	Material Cost	Labor Cost	Total Cost	
1 Real, Quezon	Bagong Silang	Kamagong Unahan	15 KVA						
2 Real, Quezon	Bagong Silang	Kamagong Gitna	15 KVA						
3 Real, Quezon	Bagong Silang	Kamagong Dulo1	15 KVA						
4 Real, Quezon	Bagong Silang	Kamagong Dulo2	15 KVA						
5 Gen. Nakar, Quezon	San Marcelino	Settlement	15 KVA						
6 Panukulan, Quezon	Bato	Lakdangin	15 KVA						
7 Panukulan, Quezon	Bato	Lakdangin Norte	15 KVA						
8 Jomalig, Quezon	Apad	Alog	15 KVA						
9 Jomalig, Quezon	Apad	Alog Norte	15 KVA						
TOTAL									

QUEZON II ELECTRIC COOPERATIVE, INC.

Brgy. Gumian Infanta, Quezon

BIDDING FOR THE SUPPLY OF MATERIALS AND LABOR FOR THE EXPANSION OF ELECTRIC DISTRIBUTION LINE IN TWENTY (9) SITIOS OF REAL, GEN. NAKAR, PANUKULAN & JOMALIG, QUEZON
FUNDING ALLOCATION 2019 SEP

MUNICIPALITY	BARANGAY	SITIO	ELECTRIC DISTRIBUTION LINE				HOUSEWIRING				OVER-ALL PROJECT COST
			Material Cost	Labor Cost	FREIGHT AND HANDLING	Total Cost	Material Cost	Labor Cost	FREIGHT AND HANDLING	Total Cost	
1 Real, Quezon	Bagong Silang	Kamagong Unahan									
2 Real, Quezon	Bagong Silang	Kamagong Gitna									
3 Real, Quezon	Bagong Silang	Kamagong Dulo1									
4 Real, Quezon	Bagong Silang	Kamagong Dulo2									
5 Gen. Nakar, Quezon	San Marcelino	Settlement									
6 Panukulan, Quezon	Bato	Lakdangin									
7 Panukulan, Quezon	Bato	Lakdangin Norte									
8 Jomalig, Quezon	Apad	Alog									
9 Jomalig, Quezon	Apad	Alog Norte									
TOTAL											

QUEZON II ELECTRIC COOPERATIVE, INC.
Brgy. Gumian, Infanta, Quezon
BILL OF MATERIALS

Project Title : Construction of DX Lines Extension for Sitio Settlement, Brgy. San Marcelino, Gen. Nakar, Quezon
Location : Sitio Settlement, Brgy. San Marcelino, Gen. Nakar, Quezon
Date :

I. DISTRIBUTION LINE

PROJECT EVALUATED COST

	DESCRIPTION	PROJECT REQUIREMENTS		UNIT COST	EXTENDED COST
Hardwares					
	Anchor, Expanding, 10,000 Pounds, 8 Way, Galvanized Steel	33	pieces		
	Bolt, Oval Eye, 5/8" X 9"	8	pieces		
	Bolt, Oval Eye, 5/8" X 10"	29	pieces		
	Bolt, Machine, 5/8" X 10"	65	pieces		
	Bolt, Machine, 5/8" X 12"	34	pieces		
	Bracket, Clevis Deadend without Spool	30	pieces		
	Clamp, Hot Line, #2 - #2/0 ACSR Main to #2 - #2/0	3	pieces		
	Clamp, Anchor Rod Bonding, Single Eye	33	pieces		
	Clamp, Loop Deadend, #1/0 ACSR	26	pieces		
	Clamp, Deadend Strain, #1/0 ACSR	2	pieces		
	Clamp, Guy Straight, 3 Bolt, Heavy Duty Steel	66	pieces		
	Clamp, Suspension, Aluminum Alloy Clevis, 2 Bolts, #2/0 ACSR (Maximum)	2	pieces		
	Clevis, Secondary Swinging without Spool	33	pieces		
	Shackle, Anchor, Forged Steel, Galvanized	2	pieces		
	Conductor, Insulated, ACSR #1/0, AWG 6/1 (25 KV)	1,280	meters		
	Conductor, Bare, ACSR #2, AWG 6/1	69	meters		
	Conductor, Bare, ACSR #1/0, AWG 6/1	2,182	meters		
	Conductor, Insulated, ACSR #2, AWG 6/1 (600 V)	1,361	meters		
	Connector, Compression, YHO 125, #6 - #1/0 ACSR Run To #6 - #2	1	piece		
	Connector, Compression, YHO 150, #3 - #1/0 ACSR Run To #6 - #2	100	pieces		
	Connector, Compression, YHO 200, #1/0 - #2/0 ACSR Run To #6 - #2	2	pieces		
	Connector, Compression, YHD 300, #1/0 - #2/0 ACSR Run To #1/0 - #2/0	9	pieces		
	Connector, Ground Rod (Clamp) for 5/8" Steel Rod	34	pieces		
	Cutout and Arrester Combination, Porcelain	2	sets		
	Hook, Guy	66	pieces		
	Insulator, Pin Type, Porcelain, ANSI, Class 56 - 1	34	pieces		
	Insulator, Spool, 1-3/4", ANSI, Class 53 - 2	39	pieces		
	Insulator, Spool, 3", ANSI, Class 53 - 4	24	pieces		
	Insulator, Suspension, 6", Porcelain, Clevis Type	8	pieces		
	Nut, Lock, Mf Type, 5/8"	134	pieces		
	Pin, Pole Top, Channel, 1" Thread, 1-3/8" X 25" Nylon Thread	34	pieces		
	Rod, Anchor, Threaded, Double Eye, 3/4" X 8'	33	pieces		
	Rod, Armor, Preformed, #2 ACSR, Single Support	31	sets		
	Rod, Tapping, Preformed, #2 ACSR	1	set		
	Rod, Armor, Preformed, #1/0 ACSR, Single Support	19	sets		
	Rod, Tapping, Preformed, #1/0 ACSR	2	sets		
	Rod, Ground Steel, Galvanized, 5/8" X 10'	34	pieces		
	Spacer, Pipe, 3/4" X 1-1/2"	34	pieces		
	Transformer, Pole Type, Conventional, Amorphous, 15 KVA	1	unit		
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16", 13/16" Diameter Hole	67	pieces		
	Wire, Tie, Aluminum Alloy, Soft, #4 AWG	152	feet		
	Wire, Tie, Insulated, Soft, #4 AWG	396	feet		
	Wire, Tape, Armor, Aluminum Alloy, 0.5 " X 0.3"	13	feet		
	Wire, Grounding, Aluminum Alloy, 3 Strand, #4 AWG	1,259	feet		
	Wire, Guy, Steel, 3/8", 7 Strand (Heavy Duty)	1,650	feet		
Concrete/Steel Material					
	Pole, Steel, 30' (3.0mm)	15	pieces		
	Pole, Steel, 35' (3.0mm)	20	pieces		

Total Material Cost _____

LABOR COST PER ASSEMBLY UNITS

ASSEMBLY UNITS	QUANTITY		UNIT COST	EXTENDED COST
I. POLE TOP ASSEMBLY UNITS				
A2	17			
A3	2			
A5	2			
II. TRANSFORMER ASSEMBLY UNITS				
G105	1			
III. GROUNDING ASSEMBLY UNITS				
M2-11A	34			
IV. GUY ASSEMBLY UNITS				
E3-2	33			
V. ANCHOR ASSEMBLY UNITS				
F1-3	33			
VI. SECONDARY ASSEMBLY UNITS				
J6	11			
J7	18			
J10	13			
VII. POLE				
25 Feet	15			
35 Feet	20			
VIII. CONDUCTOR ASSEMBLY				
BARE				
#1/0, AWG, ASCR	2.182	*kms*		
INSULATED				
#2N, AWG	1.359	*kms*		
#1/0, AWG	1.280	*kms*		
IX. MISCELLANEOUS ASSEMBLY UNITS				
M5-1	2			
M5-10	2			

Total Labor Cost _____

Total Distribution Line Cost _____

II. HOUSEWIRING

(Materials For 20 Households)

DESCRIPTION	PROJECT REQUIREMENTS	UNIT COST	EXTENDED COST
Safety Switch (30Amps.)	20 *sets*		
PDX Wire # 8	100 *meters*		
PDX Wire # 12	200 *meters*		
PDX Wire # 14	200 *meters*		
Convenience Outlet (2 Gang)	20 *sets*		
Receptacle	40 *pieces*		
Tumbler Switch	40 *pieces*		
Staple Wire	600 *pieces*		
Electrical Tape (Big)	20 *pieces*		
Junction Box	40 *pieces*		
CFL Bulb (15W)	40 *pieces*		

Total Material Cost _____

Labor Cost _____

Total Housewiring Cost _____

OVER-ALL PROJECT COST (DISTRIBUTION LINE + HOUSEWIRING) _____

QUEZON II ELECTRIC COOPERATIVE, INC.
Brgy. Gumian, Infanta, Quezon
BILL OF MATERIALS

Project Title : Construction of DX Lines Extension for Sitio Lakdangin, Lakdangin Norte, Brgy. Bato, Panukulan, Quezon
Location : Sitio Lakdangin, Lakdangin Norte, Brgy. Bato, Panukulan, Quezon
Date :

I. DISTRIBUTION LINE

PROJECT EVALUATED COST

	DESCRIPTION	PROJECT REQUIREMENTS		UNIT COST	EXTENDED COST
Hardwares					
	Anchor, Expanding, 10,000 Pounds, 8 Way, Galvanized Steel	38	pieces		
	Bolt, Double Upset, 5/8" X 10"	6	pieces		
	Bolt, Oval Eye, 5/8" X 9"	20	pieces		
	Bolt, Oval Eye, 5/8" X 10"	14	pieces		
	Bolt, Machine, 5/8" X 8"	16	pieces		
	Bolt, Machine, 5/8" X 10"	66	pieces		
	Bolt, Machine, 5/8" X 12"	48	pieces		
	Bolt, Single Upset, 5/8" X 8"	8	pieces		
	Bolt, Single Upset, 5/8" X 10"	2	pieces		
	Bracket, Clevis Deadend without Spool	26	pieces		
	Clamp, Hot Line, #2 - #2/0 ACSR Main to #2 - #2/0	4	pieces		
	Clamp, Anchor Rod Bonding, Single Eye	38	pieces		
	Clamp, Loop Deadend, #1/0 ACSR	28	pieces		
	Clamp, Deadend Strain, #1/0 ACSR	4	pieces		
	Clamp, Guy Straight, 3 Bolt, Heavy Duty Steel	76	pieces		
	Clamp, Suspension, Aluminum Alloy Clevis, 2 Bolts, #2/0 ACSR (Maximum)	6	pieces		
	Clevis, Secondary Swinging without Spool	24	pieces		
	Shackle, Anchor, Forged Steel, Galvanized	6	pieces		
	Conductor, Insulated, ACSR #1/0, AWG 6/1 (25 KV) Tree Wire, ACSR/AW	2,179	meters		
	Conductor, Bare, ACSR #2, AWG 6/1	94	meters		
	Conductor, Bare, ACSR #1/0, AWG 6/1	2,855	meters		
	Conductor, Insulated, ACSR #2, AWG 6/1 (600 V)	676	meters		
	Connector, Compression, YHO 125, #6 - #1/0 ACSR Run To #6 - #2	1	piece		
	Connector, Compression, YHO 150, #3 - #1/0 ACSR Run To #6 - #2	123	pieces		
	Connector, Compression, YHO 200, #1/0 - #2/0 ACSR Run To #6 - #2	2	pieces		
	Connector, Compression, YHD 300, #1/0 - #2/0 ACSR Run To #1/0 - #2/0	10	pieces		
	Connector, Ground Rod (Clamp) for 5/8" Steel Rod	47	pieces		
	Cutout and Arrester Combination, Porcelain	2	sets		
	Hook, Guy	76	pieces		
	Insulator, Pin Type, Porcelain, ANSI, Class 56 - 1	56	pieces		
	Insulator, Spool, 1-3/4", ANSI, Class 53 - 2	56	pieces		
	Insulator, Spool, 3", ANSI, Class 53 - 4	10	pieces		
	Insulator, Suspension, 6", Porcelain, Clevis Type	20	pieces		
	Nut, Eye, 5/8", Conventional	2	pieces		
	Nut, Lock, Mf Type, 5/8"	176	pieces		
	Pin, Pole Top, Channel, 1" Thread, 1 3/8" x 25" Long, Hot Dip Galvanized	56	pieces		
	Rod, Anchor, Threaded, Double Eye, 3/4" X 8'	38	pieces		
	Rod, Armor, Preformed, #2 ACSR, Single Support	12	sets		
	Rod, Tapping, Preformed, #2 ACSR	1	set		
	Rod, Armor, Preformed, #1/0 ACSR, Single Support	40	sets		
	Rod, Tapping, Preformed, #1/0 ACSR	2	sets		
	Rod, Ground Steel, Galvanized, 5/8" X 10'	47	pieces		
	Spacer, Pipe, 3/4" X 1-1/2"	48	pieces		
	Transformer, Pole Type, Conventional, Amorphous, 15 KVA	1	set		
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16", 13/16" Diameter Hole	90	pieces		
	Wire, Tie, Aluminum Alloy, Soft, #4 AWG	304	feet		
	Wire, Tie, Insulated, Soft, #4 AWG	496	feet		
	Wire, Tape, Armor, Aluminum Alloy, 0.5 " X 0.3"	14	feet		
	Wire, Grounding, Aluminum Alloy, 3 Strand, #4 AWG	1,700	feet		
	Wire, Guy, Steel, 3/8", 7 Strand	1,900	feet		

Concrete/Steel Material					
	Pole, Steel, 30' (3.0mm)	7	pieces		
	Pole, Steel, 35' (3.0mm)	40	pieces		

Total Material Cost _____

LABOR COST PER ASSEMBLY UNITS

ASSEMBLY UNITS		QUANTITY		UNIT COST	EXTENDED COST
I. POLE TOP ASSEMBLY UNITS					
A1		8			
A2		24			
A3		6			
A4		1			
A5		2			
II. TRANSFORMER ASSEMBLY UNITS					
G105		1			
III. GROUNDING ASSEMBLY UNITS					
M2-11A		47			
IV. GUY ASSEMBLY UNITS					
E3-2		38			
V. ANCHOR ASSEMBLY UNITS					
F1-3		38			
VI. SECONDARY ASSEMBLY UNITS					
J5		6			
J6		8			
J7		4			
J8		2			
J10		2			
J15		2			
VII. POLE					
30 Feet		7			
35 Feet		40			
VIII. CONDUCTOR ASSEMBLY					
BARE					
#1/0, AWG, ASCR		2.855	Kms.		
INSULATED					
#2N, AWG		0.676	Km.		
#1/0, AWG		2.179	Kms.		
IX. MISCELLANEOUS ASSEMBLY UNITS					
M5-1		2			
M5-10		2			

Total Labor Cost _____

Total Distribution Line Cost _____

II. HOUSEWIRING

(Materials For 12 Lakdangin Norte + 20 Lakdangin = 32 Households)

DESCRIPTION	PROJECT REQUIREMENTS	UNIT COST	EXTENDED COST
Safety Switch (30Amps.)	32 *sets*		
PDX Wire # 8	160 *meters*		
PDX Wire # 12	320 *meters*		
PDX Wire # 14	320 *meters*		
Convenience Outlet (2 Gang)	32 *sets*		
Receptacle	64 *pieces*		
Tumbler Switch	64 *pieces*		
Staple Wire	960 *pieces*		
Electrical Tape (Big)	32 *pieces*		
Junction Box	64 *pieces*		
CFL Bulb (15W)	64 *pieces*		

Total Material Cost _____

Labor Cost _____

Total Housewiring Cost _____

OVER-ALL PROJECT COST (DISTRIBUTION LINE + HOUSEWIRING) _____

QUEZON II ELECTRIC COOPERATIVE, INC.
Brgy. Gumian, Infanta, Quezon
BILL OF MATERIALS

Project Title : Construction of DX Lines Extension for Sitio Alog & Alog Norte, Brgy. Apad, Jomalig, Quezon
Location : Sitio Alog & Alog Norte, Brgy. Apad, Jomalig, Quezon
Date :

I. DISTRIBUTION LINE

PROJECT EVALUATED COST

DESCRIPTION	PROJECT REQUIREMENTS		UNIT COST	EXTENDED COST
Hardwares				
Anchor, Expanding, 10,000 Pounds, 8 Way, Galvanized Steel	57	pieces		
Bolt, Double Upset, 5/8" X 10"	8	pieces		
Bolt, Oval Eye, 5/8" X 9"	8	pieces		
Bolt, Oval Eye, 5/8" X 10"	8	pieces		
Bolt, Thimble Eye, 5/8" X 9", Straight Type	7	pieces		
Bolt, Machine, 5/8" X 8"	20	pieces		
Bolt, Machine, 5/8" X 10"	130	pieces		
Bolt, Machine, 5/8" X 12"	68	pieces		
Bolt, Single Upset, 5/8" X 8"	10	pieces		
Bolt, Single Upset, 5/8" X 10"	2	pieces		
Bracket, Clevis Deadend without Spool	69	pieces		
Clamp, Hot Line, #2 - #2/0 ACSR Main to #2 - #2/0	6	pieces		
Clamp, Anchor Rod Bonding, Single Eye	57	pieces		
Clamp, Loop Deadend, #1/0 ACSR	24	pieces		
Clamp, Deadend Strain, #1/0 ACSR	4	pieces		
Clamp, Guy Straight, 3 Bolt, Heavy Duty Steel	128	pieces		
Clevis, Secondary Swinging without Spool	12	pieces		
Conductor, Bare, ACSR #2/0, AWG 6/1	3,388	meters		
Conductor, Bare, ACSR #2, AWG 6/1	650	meters		
Conductor, Bare, ACSR #1/0, AWG 6/1	3,996	meters		
Conductor, Insulated, ACSR #2, AWG 6/1 (600 V)	2,175	meters		
Connector, Compression, YHO 125, #6 - #1/0 ACSR Run To #6 - #2	2	pieces		
Connector, Compression, YHO 150, #3 - #1/0 ACSR Run To #6 - #2	148	pieces		
Connector, Compression, YHO 200, #1/0 - #2/0 ACSR Run To #6 - #2	3	pieces		
Connector, Compression, YHD 300, #1/0 - #2/0 ACSR Run To #1/0 - #2/0	16	pieces		
Connector, Ground Rod (Clamp) for 5/8" Steel Rod	20	pieces		
Cutout and Arrester Combination, Porcelain	3	sets		
Hook, Guy	114	pieces		
Insulator, Pin Type, Porcelain, ANSI, Class 56 - 1	78	pieces		
Insulator, Spool, 1-3/4", ANSI, Class 53 - 2	58	pieces		
Insulator, Spool, 3", ANSI, Class 53 - 4	43	pieces		
Insulator, Suspension, 6", Porcelain, Clevis Type	8	pieces		
Nut, Lock, Mf Type, 5/8"	257	pieces		
Nut, Thimble Eye, 5/8", Single Eye	7	pieces		
Pin, Crossarm, Steel, 3/4"x17"x 1-3/8", 23KV, Nylon Thread, Hot Dip Galvanized	78	pieces		
Rod, Anchor, Threaded, Double Eye, 3/4" X 8'	57	pieces		
Rod, Armor, Preformed, #2 ACSR, Single Support	43	sets		
Rod, Tapping, Preformed, #2 ACSR	2	sets		
Rod, Armor, Preformed, #1/0 ACSR, Single Support	46	sets		
Rod, Tapping, Preformed, #1/0 ACSR	3	sets		
Rod, Ground Steel, Galvanized, 5/8" X 10'	20	pieces		
Spacer, Pipe, 3/4" X 1-1/2"	68	pieces		
Transformer, Pole Type, Conventional, Amorphous, 15 KVA	2	units		
Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16", 13/16" Diameter Hole	125	pieces		
Washer, Square, Curved, 3" X 3" X 5/16" with 11/16" Diameter Hole	7	pieces		
Wire, Tie, Aluminum Alloy, Soft, #4 AWG	352	feet		
Wire, Tie, Insulated, Soft, #4 AWG	796	feet		
Wire, Tape, Armor, Aluminum Alloy, 0.5 " X 0.3"	12	feet		
Wire, Grounding, Aluminum Alloy, 3 Strand, #4 AWG	972	feet		
Wire, Guy, Steel, 3/8", 7 Strand	4,690	feet		

Concrete/Steel Material					
	Pole, Steel, 30' (3.0mm)	15	pieces		
	Pole, Steel, 35' (3.0mm)	46	pieces		

Total Material Cost _____

LABOR COST PER ASSEMBLY UNITS

ASSEMBLY UNITS	QUANTITY		UNIT COST	EXTENDED COST
I. POLE TOP ASSEMBLY UNITS				
A1	10			
A2	34			
A4	1			
A5	2			
II. TRANSFORMER ASSEMBLY UNITS				
G105	2			
III. GROUNDING ASSEMBLY UNITS				
M2-11A	20			
IV. GUY ASSEMBLY UNITS				
E2-2	7			
E3-2	57			
V. ANCHOR ASSEMBLY UNITS				
F1-3	57			
VI. SECONDARY ASSEMBLY UNITS				
J5	8			
J6	8			
J8	2			
J10	35			
VII. POLE				
30 Feet	15			
35 Feet	46			
VIII. CONDUCTOR ASSEMBLY				
BARE				
#2, AWG, ASCR	0.608	Kms.		
#1/0, AWG, ASCR	3.996	Kms.		
INSULATED				
#2N, AWG	2.171	Kms.		
#1/0, AWG	3.388	Kms.		
IX. MISCELLANEOUS ASSEMBLY UNITS				
M5-1	3			
M5-10	3			

Total Labor Cost _____

Total Distribution Line Cost _____

II. HOUSEWIRING

(Materials For 10 Sitio Alog Norte + 20 Sitio Alog = 30 Households)

DESCRIPTION	PROJECT REQUIREMENTS	UNIT COST	EXTENDED COST
Safety Switch (30Amps.)	30 *sets*		
PDX Wire # 8	150 *meters*		
PDX Wire # 12	300 *meters*		
PDX Wire # 14	300 *meters*		
Convenience Outlet (2 Gang)	30 *sets*		
Receptacle	60 *pieces*		
Tumbler Switch	60 *pieces*		
Staple Wire	900 *pieces*		
Electrical Tape (Big)	30 *pieces*		
Junction Box	60 *pieces*		
CFL Bulb (15W)	60 *pieces*		

Total Material Cost _____

Labor Cost _____

Total Housewiring Cost _____

OVER-ALL PROJECT COST (DISTRIBUTION LINE + HOUSEWIRING) _____

QUEZON II ELECTRIC COOPERATIVE, INC.
Brgy. Gumian, Infanta, Quezon
BILL OF MATERIALS

Project Title : Construction of DX Lines Extension for Sitio Kamagong Unahan, Gitna, Dulo1, Dulo2, Brgy. Bagong Silang Real, Quezon
Location : Sitio Kamagong Unahan, Gitna, Dulo1, Dulo2, Brgy. Bagong Silang Real, Quezon
Date :

I. DISTRIBUTION LINE

PROJECT EVALUATED COST

DESCRIPTION	PROJECT REQUIREMENTS		UNIT COST	EXTENDED COST
Hardwares				
Anchor, Expanding, 10,000 Pounds, 8 Way, Galvanized Steel	113	pieces		
Bolt, Carriage 3/8" X 4-1/2"	12	pieces		
Bolt, Double Arming, 5/8" X 18"	9	pieces		
Bolt, Double Upset, 5/8" X 12"	3	pieces		
Bolt, Oval Eye, 5/8" X 10"	140	pieces		
Bolt, Oval Eye, 5/8" X 12"	76	pieces		
Bolt, Machine, 1/2" X 12"	3	pieces		
Bolt, Machine, 5/8" X 10"	6	pieces		
Bolt, Machine, 5/8" X 12"	250	pieces		
Bolt, Machine, 5/8" X 14"	132	pieces		
Bolt, Single Upset, 5/8" X 12"	3	pieces		
Brace, Crossarm, 28", Steel or Wood	12	each		
Bracket, Clevis Deadend without Spool	129	pieces		
Clamp, Hot Line, #2 - #2/0 ACSR Main to #2 - #2/0	25	pieces		
Clamp, Anchor Rod Bonding, Single Eye	113	pieces		
Clamp, Loop Deadend, #1/0 ACSR	134	pieces		
Clamp, Deadend Strain, #2/0 ACSR	31	pieces		
Clamp, Guy Straight, 3 Bolt, Heavy Duty Steel	226	pieces		
Clamp, Suspension, Aluminum Alloy Clevis, 2 Bolts, #2/0 ACSR (Maximum)	45	pieces		
Clevis, Secondary Swinging without Spool	152	pieces		
Shackle, Anchor, Forged Steel, Galvanized	45	pieces		
Conductor, Bare, ACSR #2, AWG 6/1	4	meters		
Conductor, Bare, ACSR #1/0, AWG 6/1	9,753	meters		
Conductor, Bare, ACSR #2/0, AWG 6/1	9,753	meters		
Conductor, Insulated, ACSR #2, AWG 6/1 (600 V)	9,532	meters		
Connector, Compression, YHO 125, #6 - #1/0 ACSR Run To #6 - #2	4	pieces		
Connector, Compression, YHO 150, #3 - #1/0 ACSR Run To #6 - #2	265	pieces		
Connector, Compression, YHO 200, #1/0 - #2/0 ACSR Run To #6 - #2	3	pieces		
Connector, Compression, YHD 300, #1/0 - #2/0 ACSR Run To #1/0 - #2/0	47	pieces		
Connector, Ground Rod (Clamp) for 5/8" Steel Rod	39	pieces		
Cutout and Arrester Combination, Porcelain	7	sets		
Hook, Guy	226	pieces		
Insulator, Pin Type, Porcelain, ANSI, Class 56 - 1	135	pieces		
Insulator, Spool, 1-3/4", ANSI, Class 53 - 2	188	pieces		
Insulator, Spool, 3", ANSI, Class 53 - 4	99	pieces		
Insulator, Suspension, 6", Porcelain, Clevis Type	152	pieces		
Nut, Eye, 5/8", Conventional	12	pieces		
Nut, Lock, Mf Type, 3/8"	12	pieces		
Nut, Lock, Mf Type, 1/2"	3	pieces		
Nut, Lock, Mf Type, 5/8"	620	pieces		
Pin, Crossarm, Steel, 3/4"x17"x 1-3/8", 23KV, Nylon Thread, Hot Dip Galvanized	135	pieces		
Rod, Anchor, Threaded, Double Eye, 3/4" X 8'	113	pieces		
Rod, Armor, Preformed, #2 ACSR, Single Support	106	sets		
Rod, Tapping, Preformed, #2 ACSR	4	sets		
Rod, Armor, Preformed, #1/0 ACSR, Single Support	114	sets		
Rod, Armor, Preformed, #2/0 ACSR, Single Support	48	sets		
Rod, Armor, Preformed, #2/0 ACSR, Double Support	66	sets		
Rod, Tapping, Preformed, #2/0 ACSR	21	sets		
Rod, Ground Steel, Galvanized, 5/8" X 10'	39	pieces		
Spacer, Pipe, 3/4" X 1-1/2"	132	pieces		

Transformer, Pole Type, Conventional, Amorphous, 15 KVA	4	units		
Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16", 13/16" Diameter Hole	387	pieces		
Washer, Round, 1-3/8" Diameter with 9/16" Diameter Hole	3	pieces		
Wire, Tie, Aluminum Alloy, Soft, #4 AWG	1,992	feet		
Wire, Tie, Insulated, Soft, #4 AWG	424	feet		
Wire, Tape, Armor, Aluminum Alloy, 0.5 " X 0.3"	67	feet		
Wire, Grounding, Aluminum Alloy, 3 Strand, #4 AWG	1,837	feet		
Wire, Guy, Steel, 3/8", 7 Strand	5,650	feet		
Concrete/Steel Material				
Pole, Concrete, 35', Class 3	101	pieces		
Crossarm, sTEEL, 3-1/2" X 4-1/2" X 8'	6	pieces		

Total Material Cost _____

LABOR COST PER ASSEMBLY UNITS

ASSEMBLY UNITS	QUANTITY		UNIT COST	EXTENDED COST
I. POLE TOP ASSEMBLY UNITS				
A1	3			
A2	66			
A3	45			
A4	11			
A5	3			
A8	3			
II. TRANSFORMER ASSEMBLY UNITS				
G105	4			
III. GROUNDING ASSEMBLY UNITS				
M2-11A	39			
IV. GUY ASSEMBLY UNITS				
E3-2	113			
V. ANCHOR ASSEMBLY UNITS				
F1-3	113			
VI. SECONDARY ASSEMBLY UNITS				
J5	3			
J6	36			
J7	40			
J10	63			
VII. POLE				
35 Feet	101			
VIII. CONDUCTOR ASSEMBLY				
BARE				
#1/0, AWG, ASCR	9.753	Kms.		
#2/0, AWG, ASCR	9.753	Kms.		
INSULATED				
#2N, AWG	9.524	Kms.		
IX. MISCELLANEOUS ASSEMBLY UNITS				
M5-1	7			
M5-10	7			

Total Labor Cost _____

Total Distribution Line Cost _____

II. HOUSEWIRING

(Materials For (4 Sitios) = 67 Households)

DESCRIPTION	PROJECT REQUIREMENTS	UNIT COST	EXTENDED COST
Safety Switch (30Amps.)	67 *sets*		
PDX Wire # 8	335 *meters*		
PDX Wire # 12	670 *meters*		
PDX Wire # 14	670 *meters*		
Convenience Outlet (2 Gang)	67 *sets*		
Receptacle	134 *pieces*		
Tumbler Switch	134 *pieces*		
Staple Wire	2,010 *pieces*		
Electrical Tape (Big)	67 *pieces*		
Junction Box	134 *pieces*		

CFL Bulb (15W)	134 *pieces*		

Total Material Cost _____
Labor Cost _____
Total Housewiring Cost _____

OVER-ALL PROJECT COST (DISTRIBUTION LINE + HOUSEWIRING) _____

Details of Technical Specification of materials to be supplied

- **Engineering Design, Plans Drawings and Specification based on NEA and QUEZELCO II Standard**

ANSI/ASTM A153 Standard Specification for Zinc Coating (hot-dipped) on iron and steel hardware

ASTM B232 Standard Specification for Concentric Lay Stranded Aluminum Conductors Coated-Steel Reinforced (ACSR)
Country of Origin: Philippines

Note: Anchor block (concrete) alternate preference for anchor log

a) *For Insulator Pin Type*
*Insulator, pin type porcelain **ANSI class 56-1***

b) *For Cut-out and Lighting Arrester*

Rated voltage (kV)	*:*	*15 KV*
BIL (kV)	*:*	*110 KV*
AIC, ASYM	*:*	*100 amps*
Place of Origin	*:*	*USA*

c) *Concrete Poles*

Round Pre-stressed Centrifugal Concrete poles
Concrete pole 25' Light weight
Specs: Round pre-stressed Centrifugal
Must have a minimum breaking load of:
200 kgs. For 25 ft
With weight approx. of
277 kgs. For 25 ft.
Bolt holes must conform with NEA specifications

Concrete pole 30' class 7A
Concrete pole 35' class 3A
Concrete pole 40' class 7A
Specs: Round pre-stressed Centrifugal
Must have a minimum breaking load of 500 kgs.
With weight approx. of
930 kgs. For 35 ft.
1,089 kgs. For 40 ft.
Concrete pole 50' class 3
Minimum break load: 1,400 kg
Top diameter – 238 mm
Butt diameter – 418 mm
Concrete pole 55' class 3
Minimum break load: 1,400 kg
Top diameter – 238 mm

Butt diameter – 435 mm

Notes:

a. All materials to be used in the project will be subject for inspection and testing by the Inspection Team of QUEZELCO II composed of Audit and Engineering personnel from their warehouse/stockyard.

b. The contractor is required to submit certifications that the materials to be used in the project passed the industry standards cited herein.

c. ***The contractor is required to submit certification from their supplier regarding the quantity and classification of poles to be delivered (whether steel or concrete).***

Details of Technical Specification of materials to be supplied

- **Engineering Design, Plans Drawings and Specification based on NEA and QUEZELCO II Standard**

ANSI/ASTM A153 Standard Specification for Zinc Coating (hot-dipped) on iron and steel hardware

ASTM B232 Standard Specification for Concentric Lay Stranded Aluminum Conductors Coated-Steel Reinforced (ACSR)
Country of Origin: Philippines

For Steel pole it must follow ASTM A36 for minimum yield strength specifications, ASTM A123 for hot-dipped galvanization specification and AWS D1.1 for welding procedures qualifications.

a) *For Distribution Transformer (Amorphous)*

Pri. Voltage	*:*	*7,620 volts*
Sec. voltage	*:*	*240 volts*
Primary bushing	*:*	*Double*
Secondary bushing	*:*	*Secondary*
Frequency	*:*	*60 Hz*
Polarity	*:*	*Additive*
Class	*:*	*OA*
HV BIL	*:*	*95 KV*
LV BIL	*:*	*30 KV*
With Tap Changer		
Country of Origin	*:*	*Philippines, Korea*

b) *Steel Pole*

For 25 ft octagonal

Design Load	*:*	*300 kgf*
Steel material	*:*	*ASTM A572*
Planting depth	*:*	*1373 mm*
Tip Dia	*:*	*120 mm*
Butt Dia	*:*	*152 mm*
Thickness	*:*	*2.5 mm*
Zinc coating	*:*	*+85 um*

With framing and climbing holes
With 2 grounding nut

For 35 ft octagonal

Design Load	*:*	*330 kgf*
Steel material	*:*	*ASTM A572*
Planting depth	*:*	*1677 mm*
Tip Dia	*:*	*127 mm*
Butt Dia	*:*	*248 mm*
Thickness	*:*	*3.0 mm*
Zinc coating	*:*	*+85 um*

With framing and climbing holes
With 2 grounding nuts

For 30 ft octagonal

Design Load	*:*	*310 kgf*
Steel material	*:*	*ASTM A572*
Planting depth	*:*	*1525 mm*
Tip Dia	*:*	*127 mm*
Butt Dia	*:*	*226 mm*
Thickness	*:*	*3.0 mm*
Zinc coating	*:*	*+85 um*

With framing and climbing holes
With 2 grounding nuts

For 40 ft octagonal

Design Load	*:*	*500 kgf*
Steel material	*:*	*ASTM A572*
Planting depth	*:*	*1800 mm*
Tip Dia	*:*	*127 mm*
Butt Dia	*:*	*317 mm*
Thickness	*:*	*3.0 mm*
Zinc coating	*:*	*+85 um*

With framing and climbing holes
With 2 grounding nuts

For Steel Poles:

1. *Design load (kg) is the applied horizontal load 2 feet from the top of the pole.*
2. *Design calculations are based on the ASCE Manual 72 "Design of Steel Transmission Pole Structures".*
3. *All steel must be hot-dipped galvanized in accordance with ASTM A123 specifications.*
4. *Welding procedures shall be in accordance with AWS D1.1 qualifications*

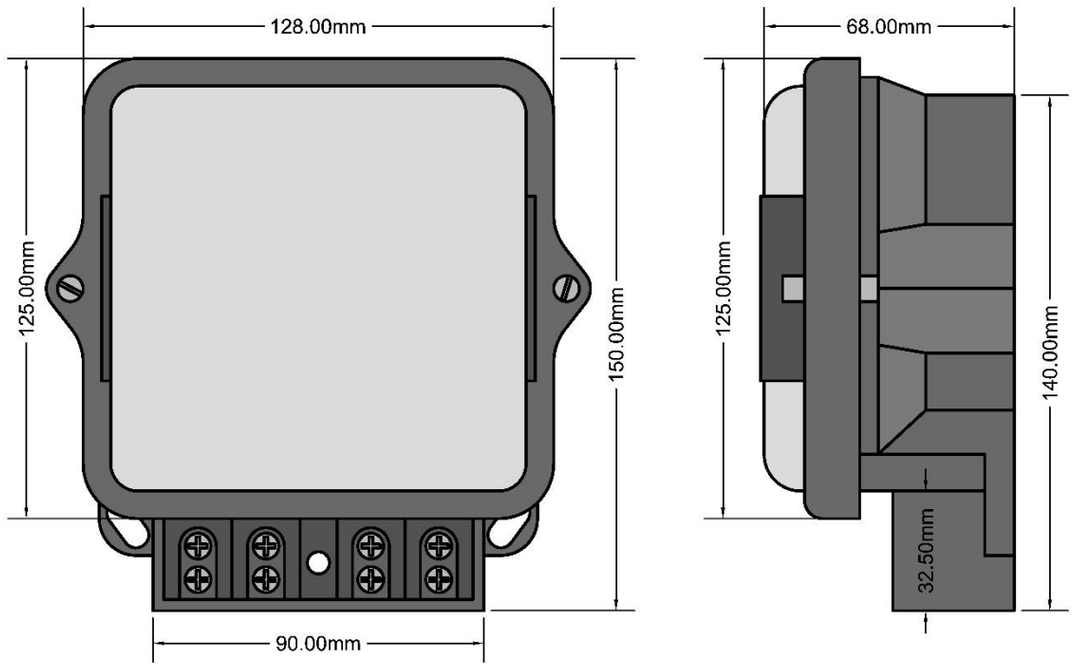
5. *Manufacturing process certified based on ISO 9001:2000 Quality Control System Standards.*

c) *For Kilowatt-hour Meters*

Form	*:*	*FS26*
Accuracy Class	*:*	*1.0*
Rated Voltage	*:*	*240 V*
Rated Current	*:*	*10(60) A*
Rated Frequency	*:*	*60 Hz.*
Meter Constant	*:*	*1,600 imp/kWh*
Display	*:*	*5 integer plus 1 decimal*
Starting Current	*:*	*0.0021 Amps.*

Must meet or exceed no load running requirement as specified under IEC 61036-2000 Standard

Dimensions:



Notes:

a. All materials to be used in the project will be subject for inspection and testing by the Inspection Team of QUEZELCO II composed of Audit and Engineering personnel from their warehouse/stockyard.

b. The contractor is required to submit certifications that the materials to be used in the project passed the industry standards cited herein.

QUEZON II ELECTRIC COOPERATIVE, INC. (QUEZELCO II)
Brgy. Gumian Infanta, Quezon

DISTRIBUTION TRANSFORMER SPECIFICATIONS

Specification :

Type	-	Conventional with Tap Changer
Core	-	Amorphous Metal
HV	-	7620 V
LV	-	120 / 240 V
Phase	-	Single
Frequency	-	60 Hz.
Bushings Primary	-	Double
Bushing Secondary	-	Triple
Phase	-	Single
Transformer Losses	-	

Rating	Amorphous Metal Core			
	No-Load Losses (Watts)	Load Losses (Watts)	Total Losses	
			(Watts)	% of Rated kVA
10	12	120	132	1.32
15	15	195	210	1.4
25	18	290	308	1.23
37.5	30	360	390	1.04
50	32	500	532	1.06
75	45	650	695	0.93
100	50	850	900	0.90
167	65	1410	1475	0.88
250	90	2000	2090	0.83

NOTE :

1. *Brand New with Transformer Test Report.*
2. *Actual transformer losses shall not exceed the values guaranteed by the manufacturer by **10%** for No-Load Losses and **6%** for Total Losses.*

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