



Barossa Offshore Project



Package No:	AIP-DSIC-009 Cable Package
Package Name:	Cables Package

<p>Scope of Work</p>	<p>The following quantities and sizes are indicative and preliminary and will be subjected to change as the project progresses.</p> <p>All cables for marine part including HV cables, LV cables, LAN cable & data bus cable.</p> <p>The Supplier scope shall include at least the services and scope of work detailed in the table below. Services or equipment, additional to those required for Supplier to provide their performance and process guarantee shall be indicated by the supplier in writing.</p> <p>The Supplier scope of work shall include:</p> <ul style="list-style-type: none"> a) The cables shall be supplied as below table. b) Supplier shall provide M.O.Q (Minimum Ordered Quantity) for each size cables. c) Each cable type shall have buy back arrangement for un-used cables. Supplier shall indicate the buy back rate and the minimum quantity for buy back. d) Supplier shall provide maximum drum length for each size of cable. e) Supplier shall label each drum with the cable drum number provided by Contractor. The drum label shall be engraved on the metal plate secured to the drum. f) Supplier shall provide warehousing facility for storing all cables and provide cable management to indicate the cable delivered, inventory in the warehouse. The format for the inventory control shall be provided by Contractor after confirmation of the order. g) Supplier shall submit type approval certificate from ABS and the factory inspection certificate. h) Supplier shall indicate the location of manufacturer, Specification, Dimension details, core identification, etc on outer sheath of the cable. i) Supplier to confirm that running length shall be printed on the outer sheath at every one (1) meter. j) Supplier shall provide the cable gland sizing chart based on the cable gland selected by Contractor. The format of the selection chart shall be provided by Contractor after confirmation of the order. k) Supplier shall confirm all HV/LV and instrument cables quoted shall be extruded inner sheath. l) Supplier shall provide the details about the buffer stock availability for the project. m) Cable jackets shall be tested to and have passed the sunlight resistance test contained in UL 1581 and the certificate shall be provided. n) The fire-resistant cables shall be capable of operating when exposed to a source of heat and simultaneously sustaining a degree of mechanical impact in accordance with IEC 60331. The relevant document shall be provided. o) Cable manufacturer test report shall be submitted to Contractor prior cable delivery. p) Cable end caps shall be provided in each drum and size of the cable. <p>General requirement of cables:</p> <ol style="list-style-type: none"> 1. All cable shall be flame-retardant to IEC60332-3-22. Where cables are designated as fire-resistant, shall have glass mica tape wrapped over the conductor and shall comply with IEC60331. The glass mica tap shall be non-toxic and non-hygroscopic. 2. The conductor of cables shall be in accordance with IEC60228, Insulation shall be XLPE in accordance with IEC60092-360. 3. All cables shall have tinned copper wire or Galvanized steel wire braid armour in accordance with IEC60092-360. Wire armour and corrugated steel tape armour are not acceptable.
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4. All armored and sheathed cables are intended for installation on open deck and will be subject to exposure to weather and sunlight. Cable jackets shall be "UV-Stabilized" and test contained in UL1581.
5. For individual screen, each pairs/triples are screened by copper backed polyester tape in contact with a stranded tinned copper drain wire and wrapped with polyester taped. Each screen shall be provided with integral drain wire of minimum 0.4mm2.
6. For high voltage cables, the conductor screen shall consist of an extruded semi-conducting compound which shall be applied over a semi-conducting tape. The extruded semi-conducting compound shall be firmly bonded to the insulation. The insulation screen shall consist of a non-metallic semi-conducting layer in combination with a metallic layer. The non-metallic layer shall be extruded directly upon the insulation of each core and consist of either a bonded or strippable semi-conducting compound.
A layer of semi-conducting tape or compound may then be applied over the individual cores or core assembly. The metallic layer shall be applied over the individual cores. The metallic layer shall consist of one or more tapes, or a braid, or a concentric layer of wires, or a combination of tape(s) and wires.

Table 1: Cable Type List

ITEM	USE	TYPICALITY	VOLTAGE (v)	REMARK
I	HV POWER CABLE	FREE HALOGEN, LOW SMOKE & FLAME RETARDANT TYPE.	8.7/15KV	SHF1
II	LV POWER CABLE	FREE HALOGEN, LOW SMOKE & FLAME RETARDANT TYPE.	0.6/1KV	SHF1,XLPE insulated, Class 2,UV resistant.
III		FREE HALOGEN, LOW SMOKE & FIRE RESISTANT TYPE.		SHF1,XLPE insulated, Class 2, UV resistant.
IV	CONTROL CABLE	FREE HALOGEN, LOW SMOKE & FLAME RETARDANT TYPE.	0.6/1KV	SHF1,XLPE insulated, Class 2, UV resistant.
V		FREE HALOGEN, LOW SMOKE & FIRE RESISTANT TYPE.		SHF1,XLPE insulated, Class 2, UV resistant.
VI	INSTRUMENT & COMMUNICATION CABLE	FREE HALOGEN, LOW SMOKE & FLAME RETARDANT TYPE.	250V	SHF1,XLPE insulated, Class 2,individual and overall screen, UV resistant.
VII		FREE HALOGEN, LOW SMOKE & FIRE RESISTANT TYPE.		SHF1,XLPE insulated, Class 2,individual and overall screen, UV resistant.
VIII	DATA COMMUNICATION CABLE	Low Smoke Zero Halogen (LSZH) cable extruded inner	250V	Galvanised steel wire braid armour

		sheath and outer sheath		UTP Category 6 (minimum) twisted pair cable Flame-retardant per IEC 60332-3 ANSI/TIA/EIA568-B standard
	IX	Fiber Optic (single-Mode)	250V	See: note 1
	X	Fiber Optic (Multi-Mode)	250V	See: note 2
	XI	Low Smoke Zero Halogen (LSZH) cable extruded inner sheath and outer sheath, flame-retardant	250V	UV resistant, High-density Polyethylene insulation, galvanized steel wire-braided armoured.
	XII	Low Smoke Zero Halogen (LSZH) cable extruded inner sheath and outer sheath. Cable to be of solid 0.64mm or 22AWG.	250V	Insulation of foam PE, galvanized steel wire braid armoured, UV resistance to UL1581, Impedance of 150ohm, capacitance of 30pf/m, oil resistance to ICEA S-73-532, 4h min retention tensile, acidity to IEC60754-1(0%)

Note 1:

Single-mode Fiber Optic Cable: Armoured

- Fiber-optic cable shall be Fire Resistant in accordance with IEC 60331.
- Single-Mode, Tight Buffered, Breakout type or Loose Tube Design
- Galvanized Steel Wire braided armour
- Low Smoke Zero Halogen (LSZH) extruded inner and outer sheath
- UV-Resistant
- Suitable for transmission systems in ITU-T G.957, ITU-T G.691, and ITU-T G.692 up to ATM-64
- Comply with ITU-T Recommendation G.652, to be used in DWDM (Dense Wavelength Division Multiplexing)
- Meet IEC 60794-1-1, 60794-1-2, and 60794-2 testing performance standard
- Core diameter shall be 9µm with 125µm cladding
- Attenuation < 0.4db/km @ 1310 nm and < 0.35db/km @ 1550 nm
- All multicore fiber optic cables shall have at least 100 % spare capacity.

Note 2:

Multimode Fiber Optic Cable: Armoured

- Fiber-optic cable shall be Fire Resistant in accordance with IEC 60331.
- Multimode, Tight Buffered, Breakout Type or Loose Tube Design
- Individual fiber reinforced with Aramid yarn.
- Galvanized Steel Wire braided armour
- Low Smoke Zero Halogen (LSZH) extruded inner and outer sheath
- UV-Resistant
- Suitable for transmission systems in ITU-T G.957, ITU-T G.691, and ITU-T G.692 up to ATM-64
- Core diameter shall be 62.5µm with 125µm cladding
- Meet IEC 60794-1-1, 60794-1-2, and 60794-2 testing performance standard
- Attenuation < 3.5/1 db/km @ 850 / 1300nm
- All multicore fiber optic cables shall have at least 100 % spare capacity.

Table 2: Quantity List

No.	Voltage	Cable size	Qty (Mtrs)	Type (see table 1)
1	8.7/15KV	3CX150	500	I
2	8.7/15KV	3CX240	500	I
3	8.7/15KV	1CX120	500	I
4	8.7/15KV	1CX150	500	I
5	8.7/15KV	1CX240	500	I
6	0.6/1KV	1CX6	500	II
7	0.6/1KV	1CX120	500	II
8	0.6/1KV	1CX150	500	II
9	0.6/1KV	1CX240	500	II
10	0.6/1KV	1C x 300	500	II
11	0.6/1KV	2C x 1.5	8000	II
12	0.6/1KV	2C x 2.5	8000	II
13	0.6/1KV	2C x 4	4000	II

14	0.6/1KV	2C x 6	4000	II
15	0.6/1KV	2C x 10	3000	II
16	0.6/1KV	2C x 16	2000	II
17	0.6/1KV	2C x 25	2000	II
18	0.6/1KV	2C x 95	3000	II
19	0.6/1KV	2C x 120	1000	II
20	0.6/1KV	2C x 150	1000	II
21	0.6/1KV	3C x 1.5	15000	II
22	0.6/1KV	3C x 2.5	10000	II
23	0.6/1KV	3C x 4	5000	II
24	0.6/1KV	3C x 6	5000	II
25	0.6/1KV	3C x 10	5000	II
26	0.6/1KV	3C x 25	2000	II
27	0.6/1KV	3C x 35	2000	II
28	0.6/1KV	3C x 50	2000	II
29	0.6/1KV	3C x 75	2000	II
30	0.6/1KV	3C x 95	2000	II
31	0.6/1KV	3C x120	2000	II
32	0.6/1KV	3C x 150	2000	II
33	0.6/1KV	3C x 240	1000	II
34	0.6/1KV	5C x 1.5	10000	IV
35	0.6/1KV	7C x 1.5	5000	IV
36	0.6/1KV	12Cx 1.5	5000	IV
37	0.6/1KV	19C x 1.5	3000	IV
38	0.6/1KV	24C x 1.5	2000	IV
39	0.6/1KV	1C x 120	500	III

40	0.6/1KV	1Cx 150	500	III
41	0.6/1KV	2C x 1.5	5000	III
42	0.6/1KV	2C x 2.5	4000	III
43	0.6/1KV	2Cx 4	2000	III
44	0.6/1KV	2C x 6	2000	III
45	0.6/1KV	2C x 10	2000	III
46	0.6/1KV	2C x 16	2000	III
47	0.6/1KV	2C x 25	1000	III
48	0.6/1KV	3C x 1.5	5000	III
49	0.6/1KV	3C x 2.5	5000	III
50	0.6/1KV	3C x 4	3000	III
51	0.6/1KV	3C x 6	2000	III
52	0.6/1KV	3C x 10	2000	III
53	0.6/1KV	3C x 16	2000	III
54	0.6/1KV	3C x 25	1000	III
55	0.6/1KV	3C x 50	1000	III
56	0.6/1KV	3C x 70	1000	III
57	0.6/1KV	3C x 95	500	III
58	0.6/1KV	3C x120	500	III
59	0.6/1KV	1CX6	500	II
60	0.6/1KV	5C x 1.5	500	V
61	0.6/1KV	7C x 1.5	500	V
62	0.6/1KV	12Cx 1.5	500	V
63	0.6/1KV	19C x 1.5	500	V
64	0.6/1KV	1CX16	500	II
65	0.6/1KV	1CX35	500	II

66	0.6/1KV	1CX70	500	II
67	250V	1X2X1.5	20000	VI
68	250V	2X2X1.5	20000	VI
69	250V	4X2X1.5	10000	VI
70	250V	7X2X1.5	5000	VI
71	250V	12X2X1.5	5000	VI
72	250V	19X2X1.5	4000	VI
73	250V	1X2X1.5	10000	VII
74	250V	2X2X1.5	10000	VII
75	250V	4X2X1.5	5000	VII
76	250V	7X2X1.5	4000	VII
77	250V	12X2X1.5	4000	VII
78	250V	19X2X1.5	3000	VII
79	250V	CAT6A	40000	VIII
80	250V	Fiber Optic (Single-Mode)	TBD	IX
81	250V	Fiber Optic (Multi-Mode)	TBD	X
82	250V	RS485	TBD	XI
83	250V	Profibus DP	TBD	XII

Contract Award Q2 2020; Delivery Q4 2020

Project Registration

ConocoPhillips is committed to ensuring Australian Industry full, fair and reasonable opportunity to participate in the Barossa Offshore Project. Expressions of Interest are invited from contractors and suppliers with the relevant capability and capacity to undertake the scope of work.

This is a request for specific expressions of interest. Contractors and suppliers will be considered for prequalification and tender if suitably qualified against this package.

Note that an important part of the project registration process is to register an Expression of Interest at the correct Scope level.

Scope level definition:

Full scope: Able to produce / supply the entire package.

Partial scope: Able to produce / supply one or more of the sub-packages.

All registrations are to be completed via ICN Gateway BarossaOffshore.icn.org.au. Please contact the ICNNT if registration assistance is required. Contact details: (08) 8922 9422 or

admin@icnnt.org.au.

Project

Website ConocoPhillips Australia

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