

ADDENDUM NO. 7

DOMINICA GEOTHERMAL RISK MITIGATION PROJECT II

TO BIDDING DOCUMENT

FOR

Design, Supply, and Installation

Procurement of

(i) New 2.2kV/11kV/33kV/69kV Substations and

(ii) New 11kV/33kV/69kV OHL and UGC

Transmission Lines

(Geothermal Power Plant to Fond Cole)

REFERENCE: DM-DGDC-384816-CW-RFB

February 26, 2024

No.	Reference	Section	Original or Previous Amendment	Amended
1	PART I, Section III – Evaluation and Qualification Criteria (Without prequalification)	<u>1.5. Subcontractors/Manufacturers /UGC/ M1</u> <u>1.5. Subcontractors/Manufacturers /UGC/ M2</u> <u>1.5. Subcontractors/Manufacturers /Substations/ M5</u>	(iii) Manufacturer’s proposed factories shall have at least ten (10) years of manufacturing experience of XLPE HV power cable. Bidder shall furnish the above supply record illustrating the supply of at least fifteen (50) km of each XLPE power cable for 11 kV, 33 kV and 69 kV rating & voltage level, outside the manufacturer’s own country within last ten (10) years. (iii) Manufacturer’s proposed factory shall have at least ten (10) years of manufacturing experience of XLPE HV power cable. Bidder shall furnish the above supply record illustrating the supply of at least fifteen (50) km of FO underground cable, outside the manufacturer’s own country within last ten (10) years. (iii) Manufacturer’s proposed factories shall have at least ten (10) years of manufacturing experience of 69 kV Instrument Transformers, Post Insulator and Surge Arresters. Bidder shall furnish the above supply record illustrating the supply of at least fifteen (50) units of each equipment for same or higher rating & voltage level, outside the manufacturer’s own country within last ten (10) years. (iv) At least 3 reference letters as evidence from end user for a minimum of five (5) years	(iii) Manufacturer’s proposed factories shall have at least ten (10) years of manufacturing experience of XLPE HV power cable. Bidder shall furnish the above supply record illustrating the supply of at least fifty (50) km of each XLPE power cable for 11 kV, 33 kV and 66 kV or higher rating & voltage level, outside the manufacturer’s own country within last ten (10) years. (iii) Manufacturer’s proposed factory shall have at least ten (10) years of manufacturing experience of FO underground cable. Bidder shall furnish the above supply record illustrating the supply of at least fifty (50) km of FO underground cable, outside the manufacturer’s own country within last ten (10) years. (iii) Manufacturer’s proposed factories shall have at least ten (10) years of manufacturing experience of 66 kV voltage level or above for Surge Arresters. Bidder shall furnish the above supply record illustrating the supply of at least fifty (50) units of each equipment for same or higher rating & voltage level, outside the manufacturer’s own country within last ten (10) years. (iv) At least 3 reference letters as evidence from end user for a minimum of five (5) years

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		<u>1.5. Subcontractors/Manufacturers /Substations/ M6</u>	satisfactory service of Instrument Transformers, Post Insulator and Surge Arresters as on the date of bid opening. Evidence from end user(s) shall be from respective end user's letterhead stationery indicating address, telephone, and email address. Verifiable operational certificates (at least three) on the letterhead of the utility/user in English must be provided to ascertain the above-mentioned requirements. (iii) Manufacturer's proposed factories shall have at least ten (10) years of manufacturing experience of 11kV, 33kV and 69 kV XLPE UGC and their corresponding indoor and outdoor cable terminations along with 69kV dry plug-in SF6 sealing end. Bidder shall furnish the above supply record illustrating the supply of at least fifteen (50) units of each equipment for same or higher rating & voltage level, outside the manufacturer's own country within last ten (10) years.	satisfactory service of Surge Arresters as on the date of bid opening. Evidence from end user(s) shall be from respective end user's letterhead stationery indicating address, telephone, and email address. Verifiable operational certificates (at least three) on the letterhead of the utility/user in English must be provided to ascertain the above-mentioned requirements. (iii) Manufacturer's proposed factories shall have at least ten (10) years of manufacturing experience of 11kV, 33kV and 66 kV voltage level or above XLPE UGC and their corresponding indoor and outdoor cable terminations along with 66kV voltage level or above dry plug-in SF6 sealing end. Bidder shall furnish the above supply record illustrating the supply of at least fifty (50) units of each equipment for same or higher rating & voltage level and ten (10) KM of each XLPE cable rating and voltage level, outside the manufacturer's own country within last ten (10) years.
2	PART I, Section III – Evaluation and Qualification Criteria (Without prequalification)	<u>1.5. Subcontractors/Manufacturers/OHL/ 69KV3SP/STEEL POLE</u>	vi. The tower manufacturer shall have designed, manufactured and supplied guyed monopole towers for at least five (5) projects of 66V voltage level or above, within the last ten (10) years. <i>We request to you please consider both self-standing Or guyed monopole towers, Please confirm.</i>	vi. The tower manufacturer shall have designed, manufactured and supplied guyed monopole towers or self-standing towers for at least five (5) projects of 66V voltage level or above, within the last ten (10) years.

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3	PART II SECTION B PARTICULAR REQUIREMENTS FOR OHL DGDC 16 Oct 23 ./ 14.9 SOIL INVESTIGATIONS	14.9 SOIL INVESTIGATIONS	a) Standard Penetration Tests (SPT) or CPT for at least every 10 km of the alignment.	Standard Penetration Tests (SPT) or CPT at each structure.
4	PART II SECTION B PARTICULAR REQUIREMENTS FOR OHL DGDC 16 Oct 23 ./ 17 Installation of Insulators, Conductors and Earth-Wires	17.6 STRINGING	Conductors and earth-wires shall be run out from drums mounted on trailers or drum stands. Conductors and earth-wires shall be pulled out and strung by the use of the Controlled-Tension Method. Conductors shall as a principle never be allowed to touch ground. [Cont'd ...]	Conductors and earth-wires shall be run out from drums mounted on trailers or drum stands. Conductors and earth-wires shall be pulled out and strung by the use of the Controlled-Tension Method. Manual stringing method is also acceptable subject to approval by the Owner of a submission by the bidder of the Manual Stringing Methodology as a method statement Conductors shall as a principle never be allowed to touch ground. [Cont'd ...]
5	Padu Substation Price schedules	Price schedule N°1: item 1.2	Auxiliary transformer 33/0.4 kV, 160kVA ONAN, complete with accessories, etc. (as per technical specifications)	Auxiliary transformer 33/0.4 kV, 100kVA ONAN, complete with accessories, etc. (as per technical specifications) (see attached PADU SUB Price Schedule_24-02-2024 file)
6	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	Annex A2-17: 33 kV Metal Clad Switchgear Guaranteed Technical Data	Rated normal current for Busbar: 2000A	Rated normal current for Busbar: 1600A

No.	Reference	Section	Original or Previous Amendment	Amended
			Circuit breaker rated normal current for incoming feeder and bus section 2000A Current Transformer ratios for: Incoming and bus coupler: 2000/1-1-1A Outgoing Feeder: 1250/1-1-1A	Circuit breaker rated normal current for incoming feeder and bus section 1250A Current Transformer ratios for: Incoming Transformer: 200-100/1-1-1A (for Padu and Trafalgar SS) and 800-400/1-1-1A (for Fond Cole SS) Outgoing Feeder: 800-400/1-1-1A Bus Coupler: 800-400/1-1A (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
7	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	6.1 General	Rated short time withstand current (1 sec): 31.5 kA (rms)	Rated short time withstand current (3 sec): 25 kA (rms) (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
8	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	Annex A2-14: 33kV XLPE Cable and accessories Guaranteed Technical Data	Cross section of wires (mm²): To be confirmed by design: For 20MVA: 240mm²/phase For 4MVA: 50mm²/phase For 3.5MVA 50mm²/phase For 100kVA 50mm²/phase Rated short circuit current (1 s.)	Cross section of wires (mm²): To be confirmed by design: For 20MVA: 240mm²/phase For 4MVA: 120mm²/phase For 3.5MVA 120mm²/phase For 100kVA 120mm²/phase Rated short circuit current (1 s.)

No.	Reference	Section	Original or Previous Amendment	Amended
			Conductor: 25kA Screen: 10kA	Conductor: 25kA (for 240mm²) and 17kA (for 120mm²) Screen: According to cross section. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
9	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	Annex A2-15: 11kV XLPE Cable and accessories Guaranteed Technical Data	Cross section of wires (mm ²): To be confirmed by design: For 20MVA 2x630mm ² /phase For 15MVA 2x400mm ² /phase For 3.5MVA 95mm²/phase For 160kVA 25mm²/phase Earthing TRs 25mm²/phase Rated short circuit current (1 s.) Conductor: 25kA Screen: 10kA	Cross section of wires (mm ²): To be confirmed by design: For 20MVA 2x630mm ² /phase For 15MVA 2x400mm ² /phase For 3.5MVA 120mm²/phase For 160kVA 120mm²/phase Earthing TRs 120mm²/phase 11kV switchgears link 2x400mm²/phase Rated short circuit current (1 s.) Conductor: 25kA (for 630mm² and 400mm²) and 17kA (for 120mm²) Screen: According to cross section. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
10	PART II SECTION B PARTICULAR REQUIREMENTS FOR	Section 11.10.3 BOLTS, NUTS AND WASHERS	“Material for anchor bolts shall conform to Mpa”	Material for anchor bolts shall conform to 800 Mpa tensile strength, Grade 8.8.’

No.	Reference	Section	Original or Previous Amendment	Amended
	OHL DGDC 16 Oct 23. Section 11.10.3 BOLTS, NUTS AND WASHERS			
11	Substation Price Schedules	FOND COLE SUB Price Schedule N°4 item19 : Factory acceptance tests (FAT) (For Major SS equipment) for all Substations	FAT for Three (03) persons :	FAT for Four (04) persons : (see attached FOND COLE SUB Price Schedule_24-02-2024 file)
12	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>(There is no specific section in the technical specification to describe the grade slab, we can refer only to the indicative drawings of the various substations)</i>	<i>All indicative drawings of the various substations</i>	Minimum thickness of grade slab = 20 cm (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
13	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>Section 31.15 - Substation Building Requirement – Internal partitions</i>	<i>Internal walls should be made of hollow blocks both sides plastered and painted, 15 cm thick minimum with a horizontal and vertical stiffener every 3 m maximum.</i>	Internal walls should be made of hollow blocks both sides plastered and painted, 20 cm thick minimum with a horizontal and vertical stiffener every 3 m maximum. Additionally, RC lintels will be incorporated into the walls to support doors and windows. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
14	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>Specific work information for substations - Civil Work design – Other Services (For each substation)</i>	<i>Super caoutchouc smooth plastering and painting should be used on all walls and roof surfaces except of the battery room, where anti-acid plastering, painting and tiling must be used.</i> <i>(So the thickness must be added)</i>	Plastering thickness: 2 cm The masonry blockwork must be plastered and covered by Super caoutchouc smooth plastering (2 layers) with elasticity which is crucial to ensure the building's durability. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)

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15	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>(There is no specific section in the technical specification to describe the water tank type and capacity)</i>		Type of water tank: Overhead Capacity : minimum 1000 L (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
16	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>Specific work information for substations - Civil Work design – Other Services (For each substation)</i>	<i>Installation of a septic tank after having all necessary approvals and authorizations, and it should respect the country's norms and standards.</i>	Must comply with regulations with a capacity up to 15 people. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
17	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>(There is no specific section in the technical specification to describe the walkway)</i>		Walkway description around building: A width of approximately 1 meter covered with non-slip tiling, positioned 17 cm above ground level (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
18	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>Section 31 - Detailed requirements for civil works – Building roof</i>	<i>The roof must ensure perfect waterproofing and effective thermal protection of the building.</i>	Regarding the waterproofing on the rooftop, it will consist of 2 layers with SBS+ protection. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
19	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>(There is no specific section in the technical specification to describe the road drainage)</i>		Road drainage will be oriented from one side with a suitable slope. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)

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20	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>Specific work information for substations – Roof</i>	- Installation of an exterior recovery system of rainwater (gutter and downspout) - The rainwater drainage pipes must be placed outside the building to avoid any risk of water infiltration inside the substation The contractor must submit for approval a detailed calculation notes for the quantification and the sizing of these ducts.	Roof drainage should be integrated with manholes, featuring an overflow positioned 20 cm above the roof slab. (Manholes are to be strategically placed at each drain change of direction) (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
21	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	<i>Specific work information for substations – fence and gate</i>	<i>The Contractor is responsible for the construction of a security fence all around the substation with all the relative necessary gates, (minimum 1 vehicles’ entry door, 1 personals’ entry door, and 1 personal’s exit door to ensure their safety and security during the execution phase)</i>	Regarding the fences, we can define two different types: - Prefabricated concrete columns every 2 meters + Isolated reinforced concrete foundation + mesh fencing 5x5 + semi-buried pallet-board + barbed wire (the height must be no less than 2.5 meters): This type of fence will be used to demarcate the substation from the DOMELEC site. - Reinforced concrete columns every 2.5 meters + isolated reinforced concrete foundations + masonry blocks + plastering + barbed wire (the height must also be no less than 2.5 meters): This type of fence will be used to separate the substation from neighboring areas or roads. (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)
22	PART II SECTION B PARTICULAR REQUIREMENTS FOR SUBSTATIONS	Annex A2-18: 11 kV Metal Clad Switchgear Guaranteed Technical Data	Circuit breaker rated normal current for incoming feeder 2000A Current Transformer ratios for: Incoming and bus coupler: 2000/1-1-1A	Circuit breaker rated normal current for incoming feeder 1250A Current Transformer ratios for: Incoming Transformer: 1200-600/1-1-1A

No.	Reference	Section	Original or Previous Amendment	Amended
			Outgoing Feeder: 1250/1-1-1A	Outgoing Feeder: 800-400/1-1-1A Incoming Generator & Link to existing 11kV Switchgear: 400-200/1-1-1A Bus Coupler: 2000-1000/1-1A (see attached PART II SECTION B PARTICULAR REQUIREMENTS SUBSTATIONS (SUB)_26-02-2024 file)