

Record of pre-bid meeting question and answers

Project: Dominica Geothermal Risk Mitigation Project

Date: 14 and 15 August 2019



#	Question	Answer
PBM-001	The bid documents are unclear on what codes / standards will apply for construction and design? Can the bidders use any international codes or are there some specific codes applicable for Dominica?	This is clearly stated in Employer's Requirements, Part 02 Specification, Section 1.14.3.
PBM-002	Where is Grid Code and Transmission Code available ?	They are available for download. Draft generation code is included within Part 2 of the bid documents.
PBM-003	The injectivity index of well WW-01 is presented as 11.4 kg/s/bar on the graph and in table 3.2.2.1 - this does not appear to match the injectivity curve included. Please clarify what information should be used.	The figures listed on the titles of the injectivity graphs for WW-01 (11.4kg/s/bar) and WW-R1 (2.5 kg/s/bar) are factors used in the calculations to produce the injectivity curves - not the gradient of the injectivity curve produced or the injectivity rate of the well. Please disregard the figures 11.4 kg/s/bar and 2.5 kg/s/bar in shown in the injectivity graph title, and also item 2.1 in table 3.2.2.1. Taking into account the items to disregard, please refer to the injection flows and pressures presented by the plotted injectivity curve and items 2.2 to 2.5 within table 3.2.2.1. An addendum will be issued to detail the injectivity curves and data for WW-01 and WW-R1 with 120 Deg C fluids also and further clarify the information provided.
PBM-004	The nominal condition for design stated as 90 kg/s but this point does not appear to appear to be on the P1 estimated output curve provided. Please clarify.	We have been conservative in our approach of setting the NCR conditions based on the anticipated WW-P1 wellhead curve. We have assumed a flow of 90 kg/s of two phase flow at 6 bara for the NCR condition, which gives a margin of approximately 10%.
PBM-005	Please elaborate on the two years support for O&M.	This is referenced in Employer's Requirements, Part 02 Specification, Section 1.1.1.7, and detailed in Section 1.12.
PBM-006	The shut in pressure listed on page 413 of part 2. Please clarify what this value is?	This is the anticipated maximum wellhead pressure at no flow.
PBM-007	Wellhead design pressure is listed as 116 bar. Please clarify what this refers to?	The pressure containment of the geothermal well(s) comprises the wellhead equipment. In particular the master valve and the side valves are manufactured to ANSI 900, which for these particular conditions are rated at 116bar. The interface of this contract is the outer flange of those valves.
PBM-008	In regards to the NCR and MCR figures. Can brine & condensate be mixed? And can WW-03 be used for to inject brine & condensate? If not, it will be difficult to support the requirements.	The NCR conditions are set out in the interface schedule included in Part 2 of the bid documents, and also in Appendix 8 of Section X of the contract forms. The NCR conditions are used to define the conditions at which performance against the guarantees shall be assessed. Please note the unitised approach to the guarantees. The MCR conditions are used to establish the non guaranteed MCR output of each unit as part of the demonstration tests. Brine and condensate can be mixed in the case of a binary plant. WW-03 can be used for condensate injection in the case of a steam turbine plant. In the case of a binary plant, it can be used for injecting some combined condensate / brine flow at amounts of not more than 5kg/s at WW-03. The remainder must be injected at WW-01 and WW-R1. An addendum will be issued to clarify this.

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PBM-009	Interface points: Please clarify if the separator is part of the Contractors scope? Please clarify the interface points?	The separator is part of the Contractors scope for this design, supply and installation contract. Scope for this design supply and installation Contract is as set out by Part 2 of the bidding documents. The interfaces for the Contract are listed and defined in the interface schedule included in Part 2 of the bidding documents.
PBM-010	Wellhead pressure & the NCR / MCR condition - please clarify the requirements. How do the 4.95 bar and 6 bar values align with the NCR / MCR conditions? Can bidders select a different point on the wellhead productivity curve? What is the pressure being considered for this bid?	The NCR conditions are set out in the interface schedule included in Part 2 of the bid documents, and also in Appendix 8 of Section X of the contract forms. The NCR conditions are used to define the conditions at which performance against the guarantees shall be assessed. Please note the unitised approach to the guarantees. The steam interface for each of two units is specified as a saturated steam flow at a specified total pressure of 5 bara. Because there is uncertainty as to what the actual NCG component in steam will be, the steam interface has been specified as a reference steam only component flow at a reference steam partial pressure. Correction curves shall be supplied with bids and used to correct actual conditions of steam component flow and steam partial pressure back to the NCR conditions. The NCR conditions for steam, based on a 5 bara total pressure at the internal interface are: Steam partial pressure = 4.95 bara at MP8 Steam component flow = 8.68 kg/sec at MP7 NCG in total steam plus NCG flow = 2.53 % by mass at MP12 The contract will require no more than 1 Bar pressure drop from wellhead through separator to the internal steam interface (between MP3 and MP8) . Contractor can choose a separator pressure based on their design within this constraint. For bidding purposes, a steam partial pressure of 5.5 bara in the separator is assumed. Therefore the bid reference brine temperature is equal to the steam saturation temperature at 5.5 bara, which is 155.4 degC. At this temperature and 1060 kJ/kg, the calculated NCR brine flow is 36.10 kg/sec per unit. These two values of temperature and flow are the brine NCR conditions. Bidders should note the correction curves required should conditions during testing vary from the NCR conditions stated. Please refer to Part 2 of the bidding documents and Part 3, Section X, Appendix 8.
PBM-011	Is an extension of time available?	No extension has been requested or granted to date
PBM-012	What are the rules / process for a situation of only one eligible bid being submitted? Can a contract be awarded?	Refer to the World Bank's Procurement Regulations for IPF Borrowers cl 5.59. Bidders should also note some "new" provisions of the revised regulations: cl 5.65 to 5.67 and 5.78 to 5.80
PBM-013	Regarding transportation of equipment, are there any restrictions on access roads?	Bidders are informed that there is no legal axle load limit in Dominica. But the design loading used for public roads is 18,000 lb/axle, so bidders should use this to determine maximum axle loadings for public roads and bridges. This limit is qualified in the case of Bailey Bridges; in the case of these "temporary" structures, the total bridge capacity is 44 metric tonnes. Bidders must note however, that the Bailey Bridge on the road to Wotten Waven was partially compromised by Hurricane Maria and so it is unlikely that the 44 tonne total load capacity still applies in this case. Bidders who attended the pre-bid meeting will have noted that the roads to the site are characterised as being narrow, steep and with small radius bends. Design of the plant and transportation arrangements will need to take that into account.

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PBM-014	Regarding the weight restrictions listed as 46 tonne - why is this a restriction and what does it apply to?	This is referenced in Employer's Requirements, Part 02 Specification, Section 3.7.4 and 5.2. It is the maximum load that can be handled by the existing port craneage.
PBM-015	Regarding the length restrictions for equipment of 12 metres - why is this a restriction? Can Contractors decide on the maximum equipment length?	This is referenced in Employer's Requirements, Part 02 Specification, Section 13.2.4. It is only a recommendation. Transportation of equipment is entirely the Contractor's risk.
PBM-016	Must employees be local, or a certain level of local content be included?	There is no specific requirements for local content.
PBM-017	Could you clarify the size of loads / rig used during drilling the well WW-P1	WW-P1 drilling rig was supplied by the Iceland Drilling Company (IDC). More information may be available from IDC but cannot be guaranteed.
PBM-018	Will land acquisition be finished before the end of 2019?	see PBM-026 below
PBM-019	How difficult is the route through the gorge?	The answer to that is subjective and for Bidders to decide based on the information provided and site inspections.
PBM-020	Why is the PPA provisional?	The PPA has been provisionally approved - the DGDC expects to be able to resolve the remaining items shortly
PBM-021	Who owns DOMLEC?	It is privately owned. Further information is provided in the Domlec website.
PBM-022	Is land licensing in the scope of the contractor?	All of the land designated as "Site" will be owned by the DGDC.
PBM-023	Is the Contractor responsible for detailed design of the SGS - and is it acceptable to simply stay in the indicated Site corridor? Or are there other restrictions?	As stated in the Employer's Requirements, the Contractor is responsible for the detailed design of the Plant. The Contractor is required to construct the Facilities only within the Site.
PBM-024	Does the Contractors scope include any equipment to treat scaling issues in the production well WW-P1?	That is outside the scope of this Contract.
PBM-025	Is an access road for future maintenance checks required to be constructed alongside the brine reinjection pipeline?	This is not specifically required.
PBM-026	What is the length of the brine reinjection pipeline down the steep cliff area?	This information can be obtained from the Employer's Requirements, Part 02.
PBM-027	Is reinjection well WW-01 under vacuum as the well injectivity curve shows the curve intersecting above 0 bar. Please clarify.	The estimated injection operating curve suggests WW-01 can accept around 16kg/s at zero WHP with 160 Deg C brine, hence the well is estimated to require positive wellhead pressure at injection rates above 16 kg/s.
PBM-028	Is it a requirement the power plant is located above the P1 wellpad?	The power plant site has been chosen as the best compromise of many factors. There is no land available below wellpad P1.
PBM-029	When will the acquisition of land be complete?	Before the 4th of November 2019
PBM-030	When will the drone pictures / videos be shared?	Relevant drone footage is included.
PBM-031	Can the DWG Cad files of all drawings be shared with Contractors?	No
PBM-032	Can a truss bridge or other solution be proposed instead of the suspension bridge?	The Bidder is free to propose alternative bridge solutions that meet the performance requirements of the specification.
PBM-033	Regarding the grid interface, do the Contractors need to discuss this directly with DOMLEC to arrange timing and installation? Will this start early in the project schedule?	The electrical interface point for the Contractor is detailed in the Interface Schedule included in Part 2 of the bidding documents. Once the Contractor's MV switchroom and associated switchgear are ready for connection to the transmission lines, the Contractor will coordinate with DOMLEC for DOMLEC to install the underground cables into the switchgear and for DOMLEC to terminate, test and commission the interconnection.

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PBM-034	The set-point for the pressure protection at WW-01 is indicated on the drawings at 20 bar. Is it a requirement to limit the wellhead pressure to 20 bar? This restriction is not shown on the well injectivity curves. Please clarify.	There is a mechanical limitation on the pressure that the well can withstand. The well injectivity curves were obtained before this limitation was imposed.
PBM-035	Regarding budget, this is indicated as \$32 million. How should we interpret this information?	This is the amount of the loan from the World Bank for CAPEX
PBM-036	The bid documents are unclear on what duties will apply for imports etc. Can this be clarified?	Bidders shall refer to attachment 3 and 5.
PBM-037	Are there any requirements for contractors from outside Dominica to work within Dominica regarding labour laws?	Bidders are directed to consult the Dominica Labour Office. Details provided in Clarification No.10
PBM-038	Do we expect taxes to be variable over time or fixed?	Bidders are directed to consult the Dominica VAT office. Details provided in Clarification No.10
PBM-039	Is the timeline for construction changeable?	The Time for Completion and Time for Operational Acceptance for Portion A and Portion B are fixed. The details within those fixed periods are for the Contractor to determine and manage.
PBM-040	Regarding noise requirements, has a study and modelling been undertaken on this subject and can this be shared with bidders?	No, the model cannot be shared with bidders. Noise limits are set based on ESIA
PBM-041	What are the requirements for bidders to acknowledge bid clarifications that are issued?	It is important that Bidders acknowledge receipt of Bid Clarifications as they are issued so that Bidders are not disadvantaged by non-receipt. This can be as simple as an email to the designated address.