

No. DB-4(1)/Main/2022  
Government of Pakistan  
Ministry of Energy, Petroleum Division  
Directorate General of Petroleum Concessions  
Petroleum House, G-5/2  
\*\*\*

Islamabad the 27<sup>th</sup> July, 2022.

Mr. Faisal Bashir,  
Network/System Administrator,  
Ministry of Energy, Petroleum Division  
Islamabad

Subject: **Consolidated Bidder Queries` Response---The Management & Operations of Pakistan Petroleum Exploration and Production Data Repository (DGPC, Ministry of Energy, Petroleum Division)**

Reference on the subject noted above.

2. Find enclosed a copy of consolidated response (duly signed and stamped each page) of queries sought by the bidders for placing it on the Ministry's official Website.
3. This issues with the approval of DG(PC) please.



Abdul Qadir  
Director (Database/MIS)


**Consolidated Bidder Queries` Response---The Management & Operations of Pakistan Petroleum  
Exploration and Production Data Repository (DGPC, Ministry of Energy, Petroleum Division)**

Sr#	Bidder Query	DGPC's Response
1	Page#83, Directory cost mentioned is US\$1155/-, we believe this is typo and it shall be 1155 PKR instead of US\$ 1155/-. Please confirm.	Insertion of US Doller with Directory Cost i.e. US \$1155 is a typo mistake which may be treated as PKR (PKR 1155).
2	Annexure-A2, Page#34, Point#1. The maximum raw capacity for the storage is mentioned as 7PB. We believe this shall be maximum extendable capacity instead of raw capacity. Please confirm.	Refer to clause 2.2 of Article-II (Scope of Work) for clarification which is reproduced as under:  "The contractor shall procure the disk storage system with in first six months of the contract with initial usable capacity of 1.5 Petabyte and shall further increase storage space as per requirement."
3	Annexure-A2, Page#34, Point#1. Please confirm the useable capacity (1.5PB) is required at what RAID Level? Also share the percentage of NL-SAS/SAS/SSD drives?	The Contractor shall be liable to provide the optimum level of data performance and security in order to use the best /supported RAID level. Furthermore, contractor shall assess the nature of data in order to make the strategy for data storage on NL-SAS/SAS/SSD drives keeping in view the priority of data at least with usage of 30% SSD and 70% SAS/NL-SAS.
4	Annexure-A2, Page#36, Point#3. The Operating System for the servers is mentioned as 1XWindows Server 2019. Do we need Data Centre Edition (with unlimited VMs) or simple Edition with the capability of creating only two VMs?	Data Centre edition will be used with unlimited VMs.
5	Annexure-A2, Page#37, Point#5. Nvidia Graphic card's specification is not mentioned like clock speed, bandwidth, etc.	Details is at Annexure-I.
6	Annexure-A2, Page#40, Point#9. Battery modules for UPS are mentioned as 4. This will not be sufficient and shall be increased to 32. Please redefine the modules count.	Four (4) Battery Modules are sufficient as single battery module contains 8/16 batteries.
7	Annexure-A3, Page#41, Point#2. The required split AC mentioned are 1.5X2= 3 Ton. This needs to be increased to 8-10 Ton at least to maintain the optimum dedicated cooling for Data Centre. Please redefine the capacity.	VRV/VRF (air condition system) has already mentioned in bid document which supports minimum 30 Ton cooling capacity and will also be used in Data Centre. Further, cooling capacity for Data Centre is increased 4 tons ceiling cassette x 2 = 8 tons instead of 1.5 ton x 2= 3 tons.
8	Annexure-A3, Page#41, Point#3. 100 KVA Power backup generator (PERKINS), it is available as Made in China and UK with huge price difference. Please clarify the Make.	Power backup generator (Perkins) should be UK based.
9	Annexure-A3, Page#41, Point#6. Which category of the Network cable is required (CAT-5 or CAT-6)?	CAT-6 (STP) or latest which supports data transfer rate up to 10Gbps.


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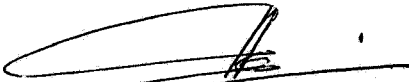
10	Annexure-A3, Page#42, Point#7. Battery modules for UPS are mentioned as 4. This will not be sufficient and shall be increased to 32. Please redefine the modules count.	Four (4) Battery Modules are sufficient as single battery module contains 8/16 batteries.
11	Annexure-A3, Page#42, Point#8. Please clarify the Firewall (CISCO) model and features.	Firewall with Software Specification at Annexure-II
12	Annexure-A3, Page#42, Point#9. Please clarify the Switch (Cisco) model and features.	Switches and wireless connectivity Specification at Annexure-III
13	The network router is not mentioned in the bid document, please advise if we already have network router available in DGPC office and can that be utilized for project team?	Router (New addition in Annexure-A3) Specification at Annexure-IV
14	A threat detection and prevention license with VM/Appliance for the firewall is missing in the Bid Document. Please advise if it is required or not?	Reply is covered in Query No. 11
15	Annexure-A6, Page#54, Point#10. Network switches are not mentioned in the requirement, do we need to purchase or can use the existing available switches of DGPC. Please mention the quantity of DGPC available switches with specifications?	Existing switches to be used for DGPC office.
16	Annexure-A6, Page#54, Point#10. Please clarify the following points about the details required in complete upgrade of infrastructure and partitioning.  a. What type of civil work is required? i. Glass partitioning or any type of partitioning. ii. Ceiling to be upgraded or existing can be utilized. iii. Floor is to be upgraded or existing can be utilized. iv. Is carpeting required in any rooms?  b. What type of Electrical Work is required? i. Cabling trough trays in the ceiling. ii. Cabling trough ducts along the floor and walls. c. For Split AC's, please identify the location of outdoor units to calculate the copper pipes.	 <b>ABDUL QADIR</b> Director (MIS) Policy Wing M/o Energy (Petroleum Division) Government of Pakistan Islamabad  a. i. Glass partitioning. ii. Existing can be utilized iii. Existing can be utilized iv. No  b. Both techniques as per requirement.  c. Outdoor units will be installed outside walls of 3 <sup>rd</sup> and 4 <sup>th</sup> floor.

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	<p>d. Do we need to consider the upgradation of Toilet, galleries and Lift areas?</p> <p>e. Do we need to consider the CCTV, surveillance setup for this facility as well?</p> <p>f. Do we need to consider the Fire Fighting equipment for this facility?</p> <p>g. Do we need to consider the upgrade of Blinds for this facility?</p> <p>h. Do we need to upgrade the Paint Work of the existing solid walls?</p> <p>i. Who will approve the design concept, dimension plan, layout plan?</p> <p>j. How much time is allocated for this activity?</p> <p>k. For the upgradation of facility, where we will move the existing staff. And do we need to consider the associated cost related to this activity?</p>	<p>d. Yes</p> <p>e. No</p> <p>f. Yes</p> <p>g. No</p> <p>h. Yes</p> <p>i. Will be approved by DGPC.</p> <p>j. 6 months (3+3) 2 Halls.</p> <p>k. Yes</p>
17	<p>Page#70, PPEDPR Project Manager. The required qualification mentioned is "B.S/M.Sc. in Geology, Geophysics, or Engineering". Please confirm that Slash (/) is used as OR condition, similarly comma (,) in Geology and Geophysics is used as OR condition.</p>	<p>"/" is used for OR condition and "," is used for OR condition as well.</p>
18	<p>Page#74, Senior Network/Hardware Engineer. Please clarify is it Network or Hardware?</p> <p>The required qualification mentioned is "B.Sc. in Electrical Engineering, MCSE or Diploma holders in Computer Hardware". Considering the nature of the Job it shall be BS in Computer Science or BS in Computer/Software Engineering or BS in hardware/network engineering etc. Please revisit the qualification criteria for this position.</p>	<p>Senior Network/Hardware Engineer should be well-versed in Network and Hardware.</p> <p>Qualification should be BSc Electrical Engineer/BS Computer Science or equivalent.</p> <p style="text-align: center;">   <b>ABDUL QADIR</b>            Director (MIS) Policy Wing            M/o Energy (Petroleum Division)            Government of Pakistan            Islamabad         </p>
19	<p>The tender SOW is restricted to certain other oilfield services providers proprietary technology solution i.e., PetroBank MDS (Master Data Store). Schlumberger believes that our solution is more modernize and up to the mark for E&amp;P industry for the net digital era. It is requested that Schlumberger should be allowed to quote the equivalent new digital solution.</p>	<p>As the proposed Contract is to maintain and manage the Pakistan Petroleum Exploration &amp; Production Data Repository with existing technology/software and does not involve the new procurement, therefore, new solution, in the presence of existing technology, does not fall under scope of this Contract.</p>
20	<p>Please advise the last 10 years project revenue breakup on different services (i.e., sale of data, subscription etc.) year on year.</p>	<p>Summary of revenue since 2009 onward is at <b>Annexure-V</b></p>

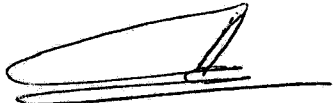
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21	<p>After detailed review of the ITT, please note that article 2.1.5 of Article II-Scope of Work read with tables in conjunction with Annexure A- Capital Expenditure of the ITT seem to suggest a restricted request to provide certain and specific oilfield services providers proprietary technology solution including Drilling Data Management Solution &amp; Petro bank MDS (master Data Store). In light if rule 10- specifications of the PPRA Rules, in order to ensure widest possible completion in tender the specification requirements need to be generic and not include specific oilfield services providers solutions references or brand name or in the minimum ensure references be qualified with term "or equivalent" to provide for a level field for all bidding oilfield services providers to ensure an essential competitive bidding process.</p>	<p>As the proposed Contract is to maintain and manage the Pakistan Petroleum Exploration &amp; Production Data Repository with existing technology/software and does not involve the new procurement, therefore, new solution, in the presence of existing technology, does not fall under scope of this Contract. The proposed add-on/module is the improvement /enhancement of existing PetroBank System. PPRA's rules do not impose any restriction to purchase the module of the same company/brand in order to meet the requirement of the existing solution. However, as far as procurement of proposed drilling data management add-on/module is concerned, vendors can propose equivalent drilling data management add-on/ module which is compatible and integrated with existing PetroBank Master Data Store technology. Further, there is no constraint in the bid document which confines the companies to participate in the tender as the contract document mentions that companies with minimum 10 years' experience in providing country level Data Management Services for E&amp; P sector, can participate in the tender.</p>
22	<p>In addition to above, Bidder believes that our solution is technologically advances and not only equivalent but instead pioneering for next digital era in the Pakistan E&amp;P industry. It is therefore, requested that Bidder be allowed to quote the equivalent new digital solution which is not expressly mentioned in ITT document.</p>	<p>The scope of work of bid document is to manage and operate the data with the existing solution and there is no significant involvement of new procurement/solution in the bid document.</p>

  
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**Graphic Card Specification:****Annexure-I**


<b>GPU Engine</b>	Cores 4864 Boost Clock (GHz) 1.67 Base Clock (GHz) 1.41
<b>Memory</b>	Standard Memory Configuration: 8 GB GDDR6 Memory Interface Width: 256-bit
<b>Display Support</b>	Maximum Digital Resolution (1): 7680x4320 Standard Display Connectors: HDMI (2), 3x DisplayPort (3) Multi Monitor: 4 HDCP: 2.3
<b>Thermal and Power</b>	Maximum GPU Temperature: 93c Graphics Card Power: 200w Required System Power: 600w Supplementary Power Connectors: 1x PCIe 8-pin (adapter to 1x 12-pin included)
<b>Technology Support</b>	Ray Tracing Cores: 2nd Generation Tensor Cores: 3rd Generation Architecture: Ampere Microsoft DirectX® 12 Ultimate: Ye DLSS: Yes Reflex: Yes Broadcast: Yes PCI Express Gen 4: Yes Resizable BAR: Yes GeForce Experience™ Yes GPU Boost™ Yes OpenGL 4.6 Yes Encoder: latest Generation Decoder: latest Generation VR Ready: Yes



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**Firewall with software:****Annexure-II**

Firewall throughput	Firewall must have Threat management support with minimum throughput 2.6 Gbps for Firewall and threat management.
Firewall VPN Throughput	IPSec VPN Throughput not less than 950 Mbps
Management Software License	Firewall must have centralized management Software license for at least two devices along with VMware software.
Form factor (rack units)	1RU
Integrated I/O	12 x 10M/100M/1GBASE-T Ethernet interfaces (RJ-45), 4 x 1 Gigabit (SFP) Ethernet interfaces
Network modules	None
Maximum number of interfaces	Up to 16 total Ethernet ports (12x1G RJ-45, 4x1G SFP)
Integrated network management ports	1 x 10M/100M/1GBASE-T Ethernet port (RJ-45)
Serial port	1 x RJ-45 console
USB	1 x USB 2.0 Type-A (500mA)
Storage	1x 100 GB, 1x spare slot (for MSP)
Fans	4 integrated (2 internal, 2 exhaust) fans

  
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**48 Port Switch for Server Room:**

Annexure-III

Product Description	48-port fixed uplinks UPoE, 12 x 1G, 4x10G uplinks, Network Advance
Modular Uplinks	No
Stacking Bandwidth Support	320 Gbps
Total 10/100/1000, Multigigabit copper or SFP Fiber	48 UPoE 12xmGig
Uplink Configuration	4x 10G fixed uplinks
SFP	Must include 10 G copper SFP for uplink if required
Jumbo frames	9198 bytes
Switching capacity	392 Gbps
Forwarding rate	291.66 Mpps
Default AC power supply	1100W AC
Total number of MAC addresses	32,000
DRAM	8 GB
Flash	16 GB
VLAN IDs	4094
Total Switched Virtual Interfaces (SVIs)	1000

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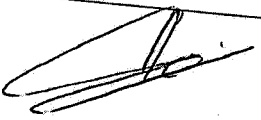
**48 Port switch (Users):**

Downlinks total 10/100/1000 copper ports	48 ports data
Uplink configuration	4 x 10G fixed uplinks
SFP	Must include 10 G copper SFP for uplink if required
Software	Network Essentials
Jumbo frames	9198 bytes
Switching capacity	176 Gbps
Forwarding rate	130.95 Mpps
DRAM	2 GB
Flash	4 GB
VLAN IDs	1024
Total Switched Virtual Interfaces (SVIs)	512
Mean time between failures (hours)	571,440



## Wireless Access Point Specifications:

802.11n version 2.0 (and related) capabilities	4x4 MIMO with four spatial streams
	Maximal Ratio Combining (MRC)
802.11ac	802.11n and 802.11a/g beamforming
	20- and 40-MHz channels
	PHY data rates up to 890 Mbps (40 MHz with 5 GHz and 20 MHz with 2.4 GHz)
	4x4 downlink MU-MIMO with four spatial streams
802.11ax	MRC
	802.11ac beamforming
	20-, 40-, 80-, and 160-MHz channels
	PHY data rates up to 3.47 Gbps (160 MHz with 5 GHz)
	4x4 downlink MU-MIMO with four spatial streams
	802.11ax beamforming
	20-, 40-, 80-, and 160-MHz channels
	PHY data rates up to 5.38 Gbps (160 MHz with 5 GHz and 20 MHz with 2.4 GHz)
Integrated antenna	Packet aggregation: A-MPDU (transmit and receive), A-MSDU (transmit and receive)
	802.11 DFS
Interfaces	2.4 GHz, peak gain 3 dbi, internal antenna, omnidirectional in azimuth
	5 GHz, peak gain 6 dbi, internal antenna, omnidirectional in azimuth
Input power requirements	1x 100, 1000, 2500 Multigigabit Ethernet (RJ-45) – IEEE 802.3bz
	Management console port (RJ-45)
	USB 2.0 (enabled via future software)
System memory	802.3at Power over Ethernet Plus (PoE+), 802.3bt Universal PoE
	802.3af PoE
Frequency band and 20-MHz operating channels	Power injector, AIR-PWRINJ5= (Note: This injector supports only 802.3af)
	2048 MB DRAM
	1024 MB flash
	G (G regulatory domain):
	2.412 to 2.472 GHz; 13 channels
	5.745 to 5.865 GHz; 7 channels

  
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Router:

Aggregate Throughput	100 Mbps to 300 Mbps
Total onboard WAN or LAN 10/100/1000 ports	3
RJ-45-based ports	2
SFP-based ports	2
Enhanced service-module slots	1
Doublewide service-module slots	0
NIM slots	2
OIR (all I/O modules)	Yes
Onboard ISC slot	1
Default memory double-data-rate 3 (DDR3) error-correction-code (ECC) DRAM (Combined control/services/data planes)	4 GB
Maximum memory DDR3 ECC DRAM (Combined control/services/data planes)	16 GB
Default flash memory	4 GB
Maximum flash memory	16 GB
External USB 2.0 slots (type A)	1
USB console port -type B mini (up to 115.2 kbps)	1
Serial console port - RJ45 (up to 115.2 kbps)	1
Serial auxiliary port - RJ45 (Up to 115.2 kbps)	1



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## Revenue Details Since 2009 onwards:

Year	Data Sale in PKR	Subscriptions in PKR	Online Data Access in PKR	Total Revenue in PKR
2009-10	67,481,236	9,390,293	-	76,871,529
2010-11	64,324,149	9,621,930	-	73,946,079
2011-12	86,430,764	9,195,782	2,191,800	97,818,346
2012-13	62,746,660	10,450,148	2,336,547	75,533,355
2013-14	115,179,974	10,239,951	4,414,903	129,834,828
2014-15	87,347,816	10,274,999	1,226,095	98,848,910
2015-16	37,765,844	9,959,727	2,510,708	50,236,279
2016-17	66,850,116	11,594,072	2,575,620	81,019,809
2017-18	102,894,048	13,293,319	1,457,820	117,645,187
2018-19	259,084,712	11,938,703	-	271,023,415
2019-20	136,464,702	16,130,309	-	152,595,011
2020-21	152,320,430	14,015,859	-	166,336,289

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