	Additional information and clarifications	Form designation	QF-G-029
		Page no.	1/2

PUBLIC ENTERPRISE ELECTRIC POWER INDUSTRY OF SERBIA, BELGRADE

PE EPS HQ
 2 Carice Milice
 Number: 12.01. 15011/15 - 2016
 Belgrade, 19 -02- 2016

In accordance with Article 54 and 63 of Public Procurement Law ("Official Gazette of the Republic of Serbia" number 124/12, 14/15 and 68/15), the Committee for public procurement number 1000/0156/2015, for the procurement of services "Information system to support generation and sale of electricity (Phase 2) and modernization of control and information SCADA system", upon the request of interested party, issues the following

**ADDITIONAL INFORMATION OR CLARIFICATIONS REGARDING TENDER PREPARATION
 No. 6**

Five or more days prior to expiry date foreseen for the submission of tenders, the interested party asked the Employer, in an written request, for the additional information, i.e. clarifications and the Employer, within three days from the date of the receipt of the request, shall publish the following information i.e. clarifications **on the Public Procurement Portal and website of the Employer:**

QUESTION 1:

Technical questions concerning the tender (dated 01.02.2016)

See Tender 5.2.2, 5.2.6, 5.2.12

1. for power plant level:

- a) Interface for real time data acquisition
- Main generator data
 - Auxiliary equipment data

Answer a: Ethernet 100Mb

b) for 1 generating unit:

- Number (roughly estimated) of binary inputs, binary outputs, measured value inputs, measured value output?

Answer b: For Thermal PP: > 2000 BI, > 700 BO, > 500 AI, < 100 AO
 For Hydro PP : > 400 BI, > 150 BO, > 90 AI, < 32 AO

c) In use or useable following interface types?


- Binary input: 24, 48, 60, 110 or 220 VDC

Answer: All of them except 60 VDC

- Binary command output: normally open contacts, potential-free

Answer: Yes

- Measured value input: 4 - 20 mA

	Additional information and clarifications	Form designation	QF-G-029
		Page no.	2/2

Answer: Add: +/- (0-10)mA, (0-20)mA

- Measured value output: 4 - 20 mA

Answer: Add: (0-20)mA

d) Independent power supply 230VAC available?

Answer d: Yes

e) Standard protocol for remote control in power systems preferred:

- IEC 60870-5-101?

- IEC 60870-5-104? or

Answer e: Both protocol can be used. It will be defined in Detail Design phase. Offered System should support both protocols.

f) Communication between central and power plant level:

- private internet (VPN)?

Answer f: Corporative ethernet backbone

g) Interface/protocol for sending a generation schedule from central level to generating unit?

Answer g: Gen. Schedules through generation control system are delivered to gen. Units as control.

2. for central level

a) 19"-racks for mounting servers, network components etc. with depth of 900mm or more?

Answer a: Only 900mm

b) Independent power supply 230VAC available?

Answer b: Yes

3. Test/Development environment

a) Which function this environment should have?

Answer a: Apart from s/w development and testing no other functions are specified for this platform

THE COMMITTEE FOR RP/1000/0156/2015

