

**GOVERNMENT OF INDIA
HEAVY INDUSTRIES AND PUBLIC ENTERPRISES
LOK SABHA**

UNSTARRED QUESTION NO:4384
ANSWERED ON:03.05.2012
SUPPLY OF POWER EQUIPMENT BY BHEL
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Will the Minister of HEAVY INDUSTRIES AND PUBLIC ENTERPRISES be pleased to state:

- (a) whether the power plants set up with Chinese gear have shown better performance than those using equipments supplied by State – run Bharat Heavy Electrical Limited (BHEL); and
- (b) if so, the details thereof including any study being conducted in this regard;
- (c) whether BHEL was given contract to maintain and supply equipments for the UP State- public sector power plants;
- (d) if so, the details of the MoU signed in this regard;
- (e) whether there have been delays on the part of BHEL in fulfilling the supply and maintenance commitments;
- (f) if so, the reasons therefor; and (g) the steps being taken to meet the commitments as per schedule?

Answer

MINISTER OF HEAVY INDUSTRIES AND PUBLIC ENTERPRISES (SHRI PRAFUL PATEL)

(a) & (b): No Madam. Power plants set up with Chinese equipment have not shown better performance than those using equipments supplied by Bharat Heavy Electricals Limited (BHEL) during the last three years.

In fact, Chinese supplied equipment have inferior heat rates (efficiencies) and the auxiliaries consume more power than that of BHEL. Secondary fuel oil consumption is also more. Average Plant Load Factor (PLF) for the period 2008-09 to 2010-11 of Chinese make units is as low as 68% as compared to BHEL's 79%. Operational Availability of Chinese make units has also been low as compared to BHEL make units. A study has been undertaken by CEA to 'Analyze the performance of Chinese Equipment vis a vis Indian equipment (BHEL), by a committee constituted by CEA.

(c): BHEL has not been given contract to maintain power plants of Uttar Pradesh State–Public Sector. However, BHEL has received the following orders of Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL):

I. Orders for supply of power plant equipment for:

- (i) Harduaganj Extension 2x250 MW Unit #8 & 9 ;
- (ii) Parichha Extension 2x250 MW Unit # 5 & 6 ;
- (iii) Anpara 'D' Extension 2x500 MW Unit # 6 & 7.

II. Orders for Renovation & Modernisation (R&M) of thermal power plants for:

- (i) Obra TPS - R&M and Uprating of 5x200 MW Unit # 9 to 13,
 - (ii) Harduaganj TPS - R&M and Uprating of 1x110 MW Unit # 7, and
 - (iii) Obra TPS - R&M of 2x100 MW Unit # 7 & 8.
- (d) to (g): Details are given at Annexure.

ANNEXURE REFERRED TO IN REPLY TO PARTS (d) TO (g) OF LOK SABHA UNSTARRED QUESTION NO. 4384
FOR ANSWER ON 03-05-2012 ON `SUPPLY OF POWER EQUIPMENT BY BHEL`

| Thermal Power Station (TPS) | BHEL Scope of work | Zero Date Completion | Contractual and steps being taken | Remarks/Reason for delay |
|------------------------------------------------|--------------------|----------------------|-----------------------------------|-----------------------------------------------------|
| I | | | | |
| (i) Harduaganj Extension of BTG and associated | Supply, E&C | 07-09-2006 | (a) Unit #8: 07-10-2009 | 7 months on account of the customer due to delay in |

civil work for appointment of consultant,
2x250 MW (b) Unit #9: finalisation of plot plan &
Unit #8 & 9 07-02-2010 release of project site for soil
investigation work. Further
intermediate delays upto 10-12
months took place in various
activities i.e. provision of
loading data for Power House
Building columns, removal of
underground hindrances in
various areas etc. by UPRVUNL.

Unit #8: Unit was handed over to
UPRVUNL on 30-01-2012. However,
improper operation by the
operating staff of UPRVUNL led
to failure in a turbine component
in March 2012. After carrying out
necessary repairs, the Unit is
running satisfactorily.

Unit #9: was synchronised on
02-04-2012.

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(ii) Supply, E&C 04- (a) Unit #5: There was an initial delay on
Parichha 08-2006 02-07-2009 account of the customer due to
Extension of BTG and delay in appointment of consultant,
associated (b) Unit #6: finalisation of plot plan & BoP
civil work 02-11-2009 inputs for power house building
for 2x250 civil design etc. by the Customer.
MW Unit # The chimney (not in BHEL scope)
5 & 6 collapsed on 24-05-2010 causing
(a) Unit #5: considerable damage to fans/ ducts
02-07-2009 and other boiler structures.
BHEL had to carry out re-erection of
all the damaged equipment.

Unit #5: Unit was synchronised on
05.02.2012 with temporary chimney.
For full load operation, availability
of permanent chimney (under customer
scope) is awaited.

Unit #6: Based on the assurance
of UPRVUNL to provide chimney
access by end June'2012, BHEL
has planned synchronization
by end Aug.'2012.

I

(iii) Anpara 2x500 MW Unit 13-01-2008 (a) Unit #6: Engineering work could commence
'D' Extension # 6 & 7 on EPC 12-04-2011 only in Dec'08 (i.e after
basis 11 months) after the receipt

(b) Unit #7: of feasibility report from
12-07-2011 UPRVUNL. Delay in approval
of drawings and certain engineering
factors took additional time.
Subsequently, UPRVUNL completed
the work of removal of transmission
line/towers etc. in Oct' 09 (after
22 months of the Zero date). The
project site is a difficult and
unsafe area as well as having
law and order problem (trouble
makers)/local issues. There were
frequent strikes by local labourers
and land losers from May'11 to
Nov'11. In spite of the difficult
conditions, work at site was started
cautiously only in Nov'11. Despite
the precarious law and order
situation in the region/area which
continues even today, BHEL is
attempting to synchronise Unit#6
by June'13 and Unit#7 thereafter
with a gap of 4-5 months.

II

(i) Obra R&M and Uprating 20-06- (a) Unit#9 : Unit #9 shutdown given by customer
TPS of 5x200 MW Unit # 2006 24-04-2008 on 02-11-2008. There were initial
9 to 13 delays in shutdown of Unit#9

for R&M (13 months), and in dismantling / new foundation of
(b) Unit#10 : Electrostatic Precipitator (ESP)
20-08-2008 under customer scope.
The scope of work at Obra R&M was to uprate the machine from 200 MW to 216 MW. The contract stipulates supply of Turbine &
(c) Unit#11 : Auxiliaries from M/s Power Machines, 20-12-2008 Russia who had the technology of uprating of machine to 216 MW. BHEL's partner, M/s Power Machines of Russia left during the course of work execution by terminating the contract unilaterally (in Aug.'2009) without providing complete materials and necessary technical documents etc. In-spite of this setback and delay resulting from it, BHEL went ahead on its own by reverse engineering and associating Siemens, Germany who are BHEL's collaborator for Turbine Generator and completed the R&M work. The Unit#9 was Synchronized on 15-09-2010 & reached 205 MW on 27-06-2011. The Unit is presently under operation.

Unit#10 shut down given by customer only on 22-03-2012. Dismantling work is in progress. ESP foundation is in customer's scope. Partial R&M scope is envisaged at present by the customer. Work completion 7 months from handing over of ESP foundation.

Unit#11 shutdown given by customer only on 13-07-2011. R&M work in progress. ESP foundation is in customer's scope. Work completion 7 months from handing over of ESP foundation.

(d) Unit#12 : Unit# 12 &13 shall be taken up 20-08-2008 progressively as and when the
(e) Unit#13 : shutdown of these Units is provided 20-12-2008 by the customer.

II

(ii) Hard R&M and Uprating 12-06- Unit#7 : BHEL could start work after the uaganj TPS of 1x110MW 2009 12-07-2011 Unit#7 was forced shut down Unit#7 on 05-03-2011. Civil foundation work under Customer scope is yet to be completed. R&M completion 8 months from handing over of foundation.

II

(iii) R&M of 04-12-2009 Uni#7 : Unit#7 remained under Obra 2x100 MW 03-11-2011 forced shutdown from 01-07-2010. TPS Unit #7&8 and BHEL could start work in March Unit#8 : 2011. Major reasons for delay is 03-07-2012 slow decision process of the customer and also inter-alia include:
1. Major spares yet to be supplied by UPRVUNL.
2. Order of extra work yet to be finalized by UPRVUNL.
R&M work for Unit#8 has been put on hold by UPRVUNL.

BHEL regularly reviews the implementation of R&M works internally. Moreover, review and monitoring of the functioning and performance of BHEL is undertaken by the Department of Heavy Industry (DHI) with a view to make further improvements.