Type 1 Optimization and The Index Test Box 1 pager

Type 1 Optimization is the development of the operating criteria for each turbine generating unit through automated index testing. It is a HDC R&D project sponsored by BPA and initiated by the regional Hydropower Optimization Team "HOT". This R&D project is following an established HDC process of making a proposal, establishing a satisfactory "proof of concept" test, developing a functioning prototype design (demonstration) and then implementation of design on each unit. We are currently in the phase of transitioning from a "proof of concept" design to prototype design.

In May 2004 HDC hired a contractor (ATEC—Douglas Albright-original patent holder) to modernize an obsolete design and computer program initially offered by the Woodward Governor Company in the mid 1980's. The product is termed an "index test box" (ITB) and was never really marketed. After very difficult negotiations, agreement was reached on a time and material contract for the procurement of a "best effort" design for a "proof of concept". Included in the contract are options (enough for 320 units) for the Government to procure more computer programs and/or devices. The Government gave commercial rights to ATEC in the original contract.

The "proof of concept" field testing was performed in Dec 2005 at McNary and Feb 2006 at Ice Harbor. Results of the testing are currently being evaluated and a report prepared to support advancing to a prototype design which is expected to be complete in October 2006. Sufficient information was gathered to establish that with extensive analysis only some of the desired operating criteria could be obtained and used.

The "best effort" "proof of concept" design field tested by the contractor and HDC met the contract minimum requirements for data collection, but fell far short in other areas, primarily data analysis and automated index testing. Funding for continued development with this contractor has been exhausted; however, the options for a usable commercial device remain open. "HOT" requested and will fund the purchase of two more devices from ATEC for continued evaluation that are specially configured for necessary data collection at Dworshak and Lower Granite. This is to support other potential improvements in turbine and powerhouse operations (Type 2 optimization).

In May 2006 the PDT and "HOT" have determined that the design offered by the contractor is unsuitable for incorporation into our control system (GDACS) because it is incomplete, is in a non compatible computer language, cannot operate unattended and poses significant GDACS system security risks through its lack of complete source code. The PDT has determined that a Government developed computer program to perform the desired T1 functions initially using data collected with the contractor's product is a better way to assure a quality product for future implementation. The contractor does not like this decision.

Many accusations and allegations about HDC business practices have been made by this contractor during the evaluation process. ATEC filed a complaint (Nov. 2005) with the DoD IG which resulted in a CID inquiry and a no merit conclusion. ATEC also filed a FOIA (June 2005) request with the Corps (no data released) and complaints with the DoE IG (Oct 2005-no merit), (May 2006-no merit), NOAA (Aug 2006-pending) and congressional staff (Adis Dumett of Sen. Murray's office WA, July 2006-pending). HDC is currently working with office of counsel to respond to a recent FOIA request (July 2006-pending). HDC assisted BPA's Federal Hydropower Office to respond to the DoE IG complaint. Additionally, HDC is responding to an informal request for information about turbine operation from NOAA which we believe is a result of ATEC's complaint to (Hon. Greg Walden—Rep-OR) congressional staff.

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