



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

FREEDOM OF INFORMATION ACT PROGRAM

May 9, 2016

In reply refer to: FOIA #BPA-2016-00728-F

Douglas Albright  
Actuation Test Equipment Company  
3393 Eddie Rd  
Winnebago, IL 61088

Mr. Albright:

This is a final response to your request for Bonneville Power Administration (BPA) records under the Freedom of Information Act, 5 U.S.C. § 552. Your request was received in our office on March 31, 2016, with an acknowledgement letter sent to you on April 5, 2016.

### **You requested:**

“[A] copy of the latest HOT Committee meeting's Agenda and Minutes, but only if the meeting was after April 6, 2015 . . . do not include any attachments to the agenda or minutes or handouts from the meeting.”

### **Response:**

We conducted a search of the records of the Power Generation Office. We have located seven pages of material responsive to your request. We are releasing six pages in full and releasing one page with redactions under Exemption (b)(7)(F) of the FOIA.

The Freedom of Information Act generally requires the release of all government records upon request. However, FOIA permits withholding certain, limited information that falls under one or more of nine statutory exemptions (5 U.S.C. §§ 552(b)(1-9)).

Because the HOT meeting included representatives from the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation, we consulted with both of these agencies before preparing a response. The U.S. Army Corps of Engineers determined that two sentences of the responsive records qualify for protection under Exemption 7(F). Exemption 7(F) protects “records or information compiled for law enforcement purposes,” the product of which “could reasonably be expected to endanger the life and/or physical safety of an individual,” (5 U.S.C. § 552(b)(7)(F)). Information that was not originally compiled for law enforcement purposes may nonetheless fall within Exemption 7 if that information is later compiled and given to law enforcement officers for security purposes (*Milner v. Dep't of the Navy*, 191 S. Ct. 1259, 1273 (2011) (Alito, J., concurring)). For purposes of Exemption 7, “preventing dam attacks and maintaining order and

ensuring dam security during dam emergencies qualify as valid law enforcement purposes.” (*Pub. Emp. For Envtl. Responsibility v. U.S. Section, It'l Boundary & Water Comm'n, U.S.-Mexico*, 740 F.3d 195, 204 (D.C. Cir. 2014)).

There are no fees associated with this request.

**Appeal:**

Pursuant to Department of Energy FOIA regulations at 10 C.F.R. § 1004.8, you may administratively appeal this response in writing within 30 calendar days. If you choose to appeal, please include the following:


- (1) The nature of your appeal - denial of records, partial denial of records, adequacy of search, or denial of fee waiver;
- (2) Any legal authorities relied upon to support the appeal; and
- (3) A copy of the determination letter.

Clearly mark both your letter and envelope with the words “FOIA Appeal,” and direct it to the following address:

Director, Office of Hearings and Appeals  
Department of Energy  
1000 Independence Avenue SW  
Washington DC 20585-1615

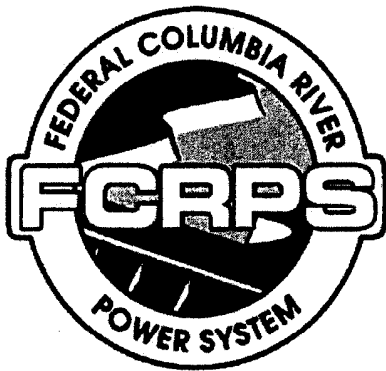
I appreciate the opportunity to assist you. If you have any questions, please contact Kim Winn, Case Coordinator, at 503-230-5273.

Sincerely,

  
C. M. Frost

Freedom of Information/Privacy Act Officer

Enclosure: Responsive documents



Wednesday, October 28, 2015  
12:30 pm – 4:30 pm  
(PST)

Join WebEx meeting

<https://www.webmeeting.att.com>

Phone Bridge: 877-873-8017  
Access: 922 8540  
Security Code: 6262

**@ BPA Headquarters  
Rm. 678**

### **Hydro-Optimization Team Meeting**

**CO-CHAIRS:** Andrew Long (USACE-HDC); George Brown (BPA); Bent Mouritsen (USBR)

#### **Agenda**

#### **12:30 pm – 4:30 pm**

- Introductions (5 min) George Brown
- Review actions (15 min) George Brown
- BPA Energy Efficiency Presentation (15 min) Erin Volz
  - Review of information collected
  - Discussion of how HOT could/should interface with BPA EE
- USACE NWD Sustainability Discussion (10 min) Jeanette Fiess
- Status of Ongoing Projects:
  - GBO Status – Plan for FY16 and beyond (15 min) Dan Patla
    - Brief status update of work that is underway
    - Lessons learned to share with HOT
  - 3D CAM Ops Surveys – FY15 results & FY16 plan (15 min) Dan Patla
    - Lessons learned to share with HOT
  - Stand Alone T2 Software (15 min) Bent Mouritsen
    - Deployment status
    - Lessons learned to share with HOT
- GDACS/T2-Optimization (30 min) Lewis Dixon

- Follow up to prior meetings discussion of T2 adoption and use.
- Reasons for it to be turned off?
  
- Break (10 min)
  
- Transformer no-load losses (5 min) John Yen
  - Update on initial collection of information
  
- Digital governor inputs into GDACS (5 min) John Yen
  - Paving the way for future efficiency audits and real time feedback
  
- Discussion of new ideas/initiatives – potential topics: (up to 1.5 hrs) All
  - Review new ideas/initiatives discussed during last meeting. Review last meeting notes.
  - Discuss any other new ideas/initiatives
  
- Combined JOC Presentation (15 min) George Brown, Andrew Long, Bent Mouritsen
  - Messages to convey?
  - Direction of HOT: Expanding existing tools to more applications (stand alone T2), adapting to changing technology (digi gov), tools for monitoring and incentivizing peak efficiency
  
- Wrap Up (10 min) George Brown, Andrew Long, Bent Mouritsen
  - Review actions items today
  - Set next meeting date
  - Add new topics for next meeting

\*\*\*\*\* NEXT MEETING TBD\*\*\*\*\*

### Hydro Optimization Team Consensus Decision Levels

1. I can say an unqualified “yes” to the proposed decision. I am satisfied that the decision is an expression of the wisdom of the group.
2. I find the proposed decision perfectly acceptable.
3. I can live with the proposed decision, although I am not especially enthusiastic about it.
4. I do not fully agree with the proposed decision and need to register my view about it. However, I do not choose to block the decision. I am willing to trust the wisdom of the group.
5. I do not agree with the decision and feel the need to stand in the way of acceptance.
6. I feel we have no clear sense of unity in the Team. We need to do more work before consensus can be reached.

## DRAFT SUMMARY

### HOT MEETING BPA HEADQUARTERS OCTOBER 28, 2015 BPA

#### Attendee List

Chris Alexander – USACE, ACCS  
George Brown – BPA, co-chair  
Lewis Dixon – USACE, ACCS (Automated Controls and Cyber Security)  
Jeanette Fiess – USACE, NWD, (Sustainability and Energy Program Manager)  
Nathan Henshaw – USACE, HDC  
Doug Komoroski – USACE, HDC  
Andrew Long – USACE, co-chair  
Bent Mouritsen – USBR, co-chair  
Tiffany Newton – BPA  
Dan Patla – USACE, HDC  
Sarah Rask – USACE, HDC  
Brian Schmidtke – USACE (phone)  
Jeff Sedgwick - USACE  
Erin Volz – BPA, energy efficiency  
John Yen – USACE, HDC

#### INTRODUCTION SUMMARY

George Brown (BPA) led introductions and reviewed the agenda.



10-28-15- HOT Team  
Agenda rev2.docx

The actions list was reviewed and revised during the meeting.



HOT Team  
Actions-10-28-2015.xls

#### HOT CHARTER



HOT Charter  
10-30-2012.pdf

#### INDEX TESTING AT THE DALLES

Discussed desire to index test some units at The Dalles to validate the GBO findings and expedite conclusion around the need for GBO at TDA.

HOT needs to work with Sondra Ruckwardt (Portland District Large Capital Program Manager) to propose an NREX project and have a PM assigned.

Target March 2016 timeframe for planning start. George Brown (BPA) to contact Sondra Ruckwardt (Corps). HDC to provide limited scope document and cost estimate for 5 or 6 units.

### **BPA ENERGY EFFICIENCY PRESENTATION**

Previous meetings identified that HOT and BPA EE collaboration could be beneficial. Erin Volz (BPA) presented on the work she undertook with BPA Energy Efficiency to collect and consolidate previous energy efficiency survey and analytical information. Prior EE information is primarily related to dam lighting and HVAC.

### **USACE NWD SUSTAINABILITY DISCUSSION**

Jeanette Fiess (Corps) discussed the energy efficiency efforts of USACE NWD.

- The Environmental Compliance Coordinators at each of the Corps Districts are currently responsible for bringing forward EE projects.
- All of the NWD sustainability efforts are being focused on the places where they pay a utility bill, so they've executed few projects at the dams/operating projects. They have done some facility audits at Lost Creek and several hatcheries. They've focused on buildings, not structures (powerhouses). NWD has spent about \$4M on EE, but not much at the dams.
- Jeanette proposes going to the JOC with the comment that there are a lot of opportunities for EE at the dams and discuss whether we should be seeking direct funds to do more of these projects.
- A meeting will be scheduled Nov 9 or 10, 2015 when Jeanette Feiss (Corps) is in Portland, including Brad Miller (BPA EE), Erin Volz (BPA), Jeanette, and George Brown. Jeff Sedgwick (Corps) may attend if available. George Brown (BPA) to set up a meeting and coordinate with Jeanette Feiss.
- Questions how can the HOT Team contribute and prioritize projects.
- The HOT Team's responsibility is to make recommendations – pros and cons and viability of the program to the JOC.

### **STATUS OF ONGOING PROJECTS:**

#### **3D CAM SURVEYS**

The HOT Team discussed 3D cams survey results. Results are fair. Cam systems are operating relatively well. Winter on-cam average was 87%. Summer on-cam average was 89%. Common problems were: head sensors were losing their signals, especially the wireless versions, and calibration errors were present.

Dan Patla (Corps) to look into potential upgrades related to 3-D cams that should be done in the next 5-years before digital governors are complete. May want to replace the head sensors and stock pile some encoders.

With the transition to digital governors, we need to establish new procedures and systems to track/audit the performance and accuracy of the digital governors. Team will transition to doing 3D Cam and digital governor surveys. Some work needs to be done to pull digital governor data into GDACS to allow historical audits.

The 3D Cam Operations Surveys will continue to be completed April and September each year and digital governor surveys will be added once the GDACS capability is completed.

#### GBO STATUS

Dan Patla (Corps) – reported on Gate blade optimizer goals: stand alone, automated units to test for and determine individual unit performance curves and optimal gate/blade relationships for all conditions.

(b)(7)(F)

As of October 2015 meeting HDC has verified that the data has been properly collected and stored.

Limited data has been collected at TDA since July 2015, largely because units were offline.

HDC expressed that more project support and monitoring would aid the GBO effort. HDC is not readily aware if the system has errored out. HDC to work on communication and monitoring processes with TDA project staff.

Future work may involve adding an HMI to the PLC, since the computer interface is no longer being used.

Work is focused on The Dalles. Two of the ten GBOs are currently deployed at The Dalles. Still working out kinks in data collection and analysis. TDA will continue to serve as the test plant.

Question about deployment for the other 8 GBO's. No plan yet until data collection issue resolved.

Question about Users Manuals for GBO at the plants and contacting HDC if an alarm goes off.

### STAND ALONE T2 SOFTWARE

Bent Mouritsen (BOR) – reported T2 software was implemented at Black Canyon and Elephant Butte control centers.

Bent Mouritsen (BOR) explained that Reclamation is not currently having any concerns/problems with T2 adoption or use. They are testing the software system for a year after which they will assess the benefits. They will collect lessons learned within the year of testing.

### GDACS/ACCS T2 PRESENTATION

Chris Alexander (Corps) and Lewis Dixon (Corps) provided a presentation. Questions remain about T2 adoption and use. Discussed if tools could be developed to inform operations about whether or not they should shut down or start up a unit, aside from the T2 recommendation.

Questions about developing tools and benefits.

### TRANSFORMER NO-LOAD LOSSES

John Yen (Corps) briefed the group on the action item to investigate transformer no-load losses. He has compiled data or estimates for all 65 of the transformers at the Corps powerhouses within the FCRPS. John will provide this information to George Brown (BPA), who will perform an analysis to estimate the energy losses associated with the transformer no load losses. The goal being to determine how substantial the losses are at each plant and whether something should be done about it.

### DIGITAL GOVERNOR INPUTS INTO GDACS

John Yes (Corps) briefed the group about digital automation for the Detroit and Big Cliff installation happening March 2016. Developing data points. Questions about audits? What systems will be reviewed? Progress being made? What to do with the data gathered?

### BRAINSTORMING – NEW INITIATIVES

The following were discussed:

- Optimization inventory.
  - Dan Patla (Corps) to begin working on this and have a draft by next HOT meeting in Spring 2016. Gap tracking and monitoring.
- Feedback. Surveys/automatic audits/real-time optimization status.
  - First step: bring digital governor inputs into GDACS (John Yen)
  - Developing tools and techniques to follow.
- User interface tools for T2 and other systems.
  - Interview plant and BPA operators to see if there would be benefit to a better understanding of optimal plant operation.
  - What are the barriers to T2 adoption right now?



- Are there errors or problems with the interface?
- Lewis and John to check with ACCS management about how to proceed.
- Incentives for operators to maximize efficiency.
  - Can T2 log energy lost due to operations decisions. Could be a tool that might help set up an incentive system.
- Energy losses.
  - Station service – collaboration with energy efficiency, pumps, large motors, HVAC, lighting (incl. emergency DC)
    - Continue working with BPA EE (George Brown, Erin Volz, Jeanette Feiss).
  - Transformer losses – How much at each plant? Any way to reduce no-load loss (John Yen)
    - John to share estimated no-load losses. George Brown to provide an analysis of energy lost.
  - Relays
    - John Yen suggested looking at relays. How much station service energy do they consume and how much could be saved if we go to solid state?
- Parallel path to GBO, index tests?
  - Andrew Long and George Brown to work with Sondra Ruckwardt in an attempt to initiate an NREX project to start preparing SSB for an AE to test up to 14 units at The Dalles. Perhaps 5 units base and 9 optional, performed in blocks of units.
  - John Yen suggested the idea of a GBO testing routine that would change unit load but still balance plant load, to speed up and improve the GBO data collection effort.
- Other far-fetched ideas for future thought:
  - Reclaiming heat from the unit and transformer heat exchanges for use in powerhouse heating.
  - Teflon thrust bearings to reduce frictional bearing losses.

#### REVIEW ACTION ITEMS

Reviewed and revised new action items list at the meeting.

#### NEXT MEETING

The next HOT meeting is scheduled for April 20, 2016 at BPA.