

WBS 1.5.1.605 – FERC eLibrary Exploration & Discovery Pilot

The screenshot displays the HydroFERC eLibrary web application. The interface includes a search bar on the left with filters for Project Number (Docket), Keywords, Key Documents, Source, and Favorited. The main content area shows search results for the keyword 'license', listing documents such as 'Order amending license and revising annual charges re Pacific Gas & Electric Co's Mokelumne River Project under P-137' and 'Letter order informing Pacific Gas and Electric Co that the October 19, 2002 report filed for Article 410 meets the requirements of the license for the Mokelumne River Project under P-137'. A 'STATS' sidebar on the right features a bar chart titled 'Date Posted' and a donut chart showing 68 results.

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Project Overview

Project Summary

- The Federal Energy Regulatory Commission’s (FERC) eLibrary is an on-line records information system that contains documents for the four industries FERC regulates.
- The eLibrary system is especially useful for the hydropower community because it contains historic and current information about environmental studies and license conditions required for individual hydropower projects.
- However, eLibrary users, including FERC staff, express frustration with the difficulty of finding and accessing relevant documents within eLibrary.
- This project is developing a software tool to improve hydropower users’ ability to locate and access documents *within the existing* eLibrary.

Intended Outcomes

- This project seeks to improve the process of finding and accessing hydropower documents and information within the eLibrary system by:
 - analyzing and improving FERC data tagging and quality; and
 - creating an alternate eLibrary tool specific to FERC hydropower data.
- When completed, the publicly-available tool will make it easier for users to find and access documents and information within FERC’s existing eLibrary system *without altering the system itself*.

Project Information

Principal Investigator(s)

- James Bradford
- Shawn Hampton
- Bo Saulsbury

Project Partners/Subs

- None

Project Status

New

Project Duration

- Project Start Date: 10/01/2020
- Project End Date: 09/30/2023

Total Costed (FY19–FY21)

\$300K

Project Objectives: Relevance

Relevance to Program Goals:

- Near-term benefit to hydropower community: improved access to information in e-Library for all stakeholders, helping to reduce cost and improve efficiency of FERC hydropower licensing process.
- Long-term benefit to hydropower community and United States: a fully-developed tool to further streamline FERC environmental review and licensing process, increasing hydropower capacity by *catalyzing the development of sustainable hydropower*.
- This supports the hydropower community as well as WPTO's strategic approach of evaluating *environmental sustainability* for new and existing hydropower developments.

Project Objectives: Approach

Approach:

- Study and model the workflows of users attempting to find specific documents or classes of documents within FERC eLibrary.
- Design and develop a search tool that is an alternative to searching in the eLibrary system—targeted at facilitating the identified user workflows.
- Improve FERC eLibrary hydropower data by copying it, analyzing trends, incorporating supplementary data sources, and performing additional tagging to annotate important documents.
- Learn from previous attempts: FERC updated its eLibrary interface in 2020, but the update did not address many of the problems users experience when searching for documents in the system.

Project Objectives: Expected Outputs and Intended Outcomes

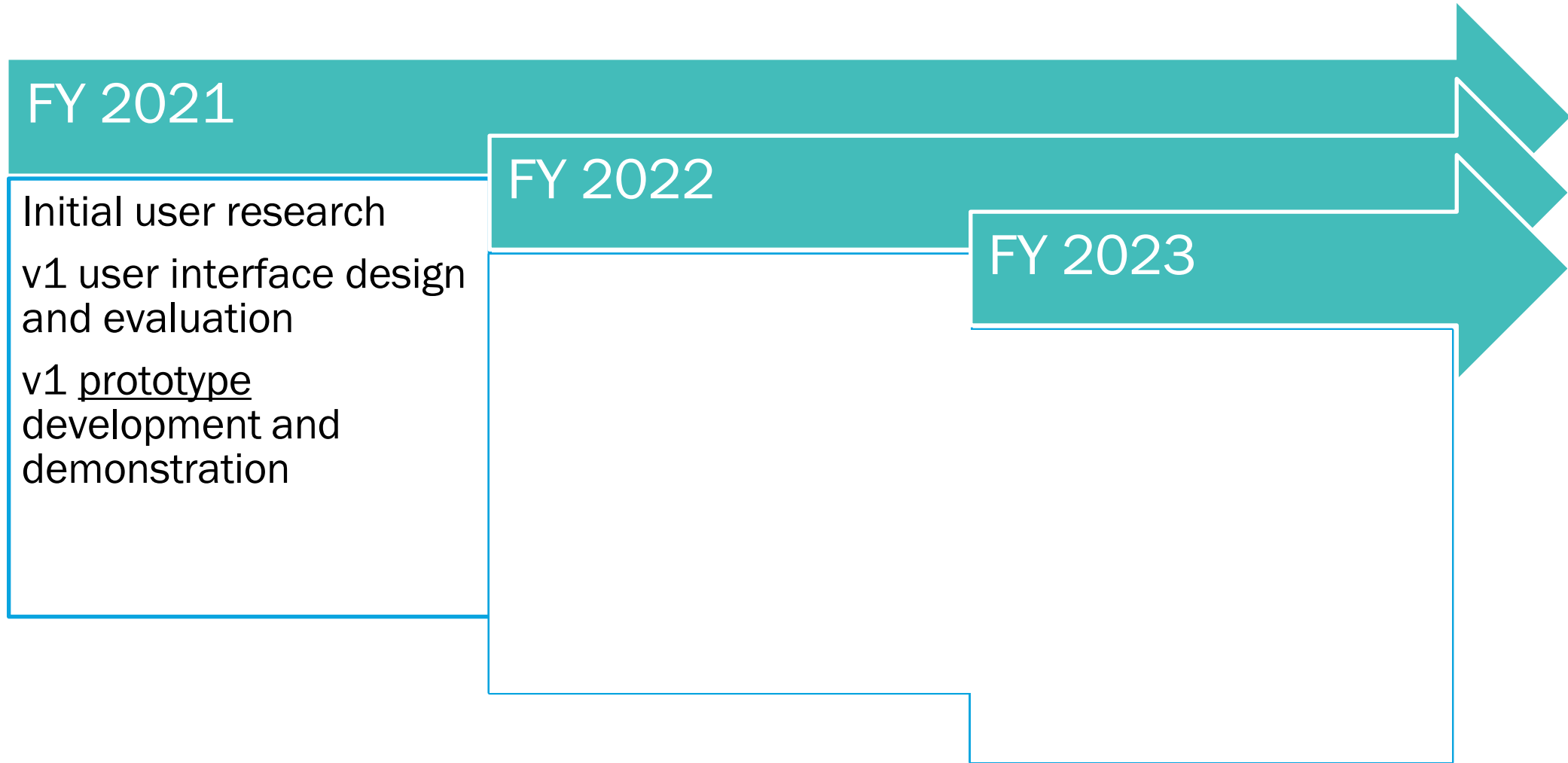
Outputs:

- A new, alternate FERC eLibrary search tool with improved features
 - Well-designed user interface, more aligned with existing conventional tools like Google Scholar or Patents
 - Improved data tagging targeted at identifying important “Key Documents” like project licenses
 - User personalization features like saving, sharing, and subscribing to updates

Outcomes:

- Stakeholders in the FERC hydropower regulatory process will have an easier time accessing documents and information
 - FERC staff
 - project developers
 - other federal, state, and local agencies
 - Tribes
 - non-governmental organizations
 - individuals

Project Timeline



Project Budget

FY19	FY20	FY21	Total Actual Costs FY19–FY21
Costed	Costed	Costed	Total Costed
\$0K	\$0K	\$300K	\$300K

Total FY21 Budget: \$450K; some variance between cost/budget due to canceled travel plans and need to retain carryover funds into FY22 to continue work under Continuing Resolution.

End-User Engagement and Dissemination

- Improved access to information in the eLibrary system for all stakeholders will help reduce the cost and improve the efficiency of the FERC hydropower licensing process.
- User Research and Testing
 - Engaged representatives from several user groups in developing project goals and methods, including WPTO, FERC, and NGO staff and researchers from NREL, ORNL, and EPRI.
 - Interviewed users to develop a task-based model for user goals and search strategies. Also engaging these users to get feedback on ongoing prototype development to measure success of the new tool against the same tasks performed in the existing FERC eLibrary tool.
- Public Deployment
 - v2 prototype slated for deployment later this FY; will allow a limited set of stakeholders to use the tool for real-world purposes and provide beta feedback.
 - Final v3 public deployment will open the tool to a broad userbase; public tool will be disseminated and socialized by PNNL and WPTO staff via social media and email announcements and webinar.

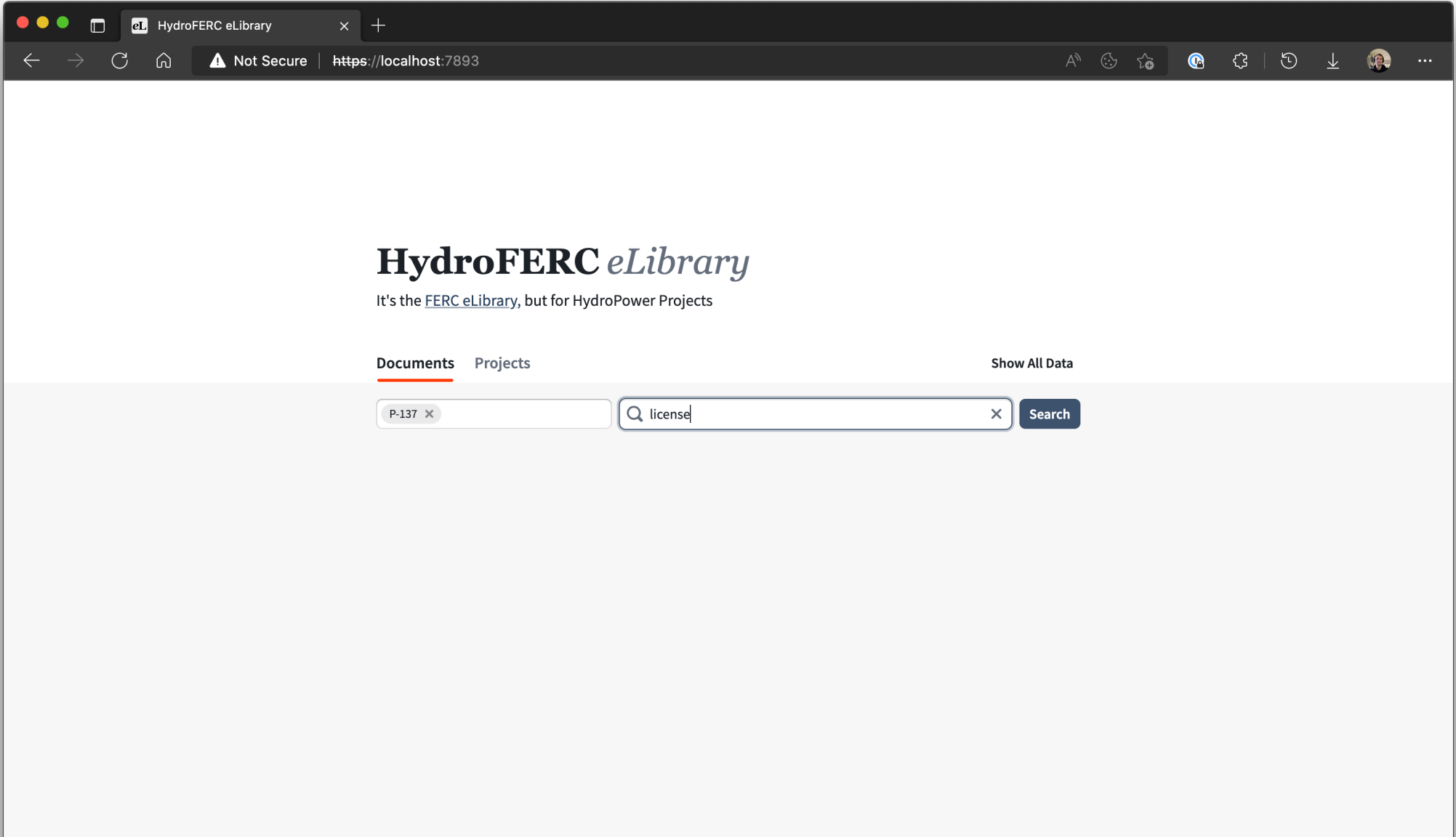
Performance: Accomplishments and Progress

- Developed software interface targeting feature improvements to existing FERC eLibrary identified during user research, including in-context search results, document previews, faster iterative searching, and an additional projects database of 1,700 projects.
- Developed a data ingest pipeline to copy relevant FERC document metadata and parse searchable raw-text from supported file types
 - 1.4 million FERC documents ingested so far, updated weekly
 - 300,000 raw-text files processed, searchable via text queries
- Developed a data post-processing procedure to correctly identify and tag 10,000+ “Key Documents” to overcome incorrect and inconsistent tagging in the FERC data.
- Deployed a v1 to a scalable cloud-based server (Amazon Web Services), demonstrating viability of future public deployments.

Future Work

- FY22
 - Deploy initial v2 beta prototype of the tool
 - Perform a 1:1 user-task-completion test against the existing FERC eLibrary to measure productivity increases and shortcomings
 - Perform usability testing with a limited set of users to identify and remedy issues
 - Refine data post-processing techniques to identify and tag more “Key Documents”
- FY23
 - Optimize database to achieve balanced performance among query speed, search coverage, and relevance sorting
 - Perform rigorous quality assurance testing and software hardening to ensure a usable, bug-free public deployment
 - Identify scope of future deployment and operations & maintenance tasks
 - Deploy public version of the tool

Screenshots: Home Screen



Screenshots: Document Search

HydroFERC eLibrary

Not Secure | https://localhost:7893/Documents

Original FERC eLibrary | About | j.bradford@pnnl.gov

SEARCH

Documents Projects Saved Filters

Project Number (Docket)
P-137

Keywords
license

Key Documents
+ Key Document Tag

Source ☐ FERC Submittal ☐ Issuance

Favorited ☐

More Filters Save Filter

68 Results

Sort: Search Score

12880733.TIF
Search Score: 100

Order amending license and revising annual charges re Pacific Gas & Electric Co's Mokelumne River Project under P-137.
03/23/2006 • Issuance • Order/Opinion, Delegated Order
2 Files
Search Score: 100

☆ Order amending license re Pacific Gas & Electric Co under P-137.
03/08/2005 • Issuance • Order/Opinion, Delegated Order
2 Files
Search Score: 100

Letter order informing Pacific Gas and Electric Co that the October 19,2002 report filed for Article 410 meets the requirements of the license for the Mokelumne River Project under P-137.
11/21/2002 • Issuance • Order/Opinion, Delegated Order
9601309.TIF
Search Score: 100

Letter order accepting Pacific Gas and Electric Co's annual report as adequately fulfilling the requirements of Article 410 of the license for the Mokelumne River Project under P-137.
09/28/2004 • Issuance • Order/Opinion, Delegated Order
10261135.TIF
Search Score: 100

STATS

Date Posted

Date	Count
2000	1
2001	2
2002	7
2003	6
2004	5
2005	3
2006	1
2007	1
2008	1
2009	1
2010	1
2011	1
2012	2
2013	2
2014	1
2015	1
2016	1
2017	1
2018	2
2019	1
2020	1
2021	1
2022	1
2023	1
2024	1

68

Screenshots: File Preview

Hydro

SEARCH

Documents

Project No.

P-137

Keywords

licen

Key Document

+ Key Document

Source

Favorites

More Filters

Back To Search

ACCESSION 20050308-3024

Order amending license re Pacific Gas & Electric Co under P-137.

Favorite

View in FERCE eLibrary

FILES

Download All

13666124.DOC

7830870.TXT

KEYTAGS

Search...

Affiliations

Document Class and Type

Category

Key Document Tag

Docket Numbers

Filed Date

Issued Date

Posted Date

Avail Code

Accession Number

AUTHOR Guey-Lee, W. • HYDROPOWER ADMINISTR...

Order/Opinion, Delegated Order

Issuance

P-137-061

03/08/2005

03/08/2005

03/08/2005

Public

20050308-3024

FILE ID 01CE5C84-66E2-5005-8110-C31FAFC91712

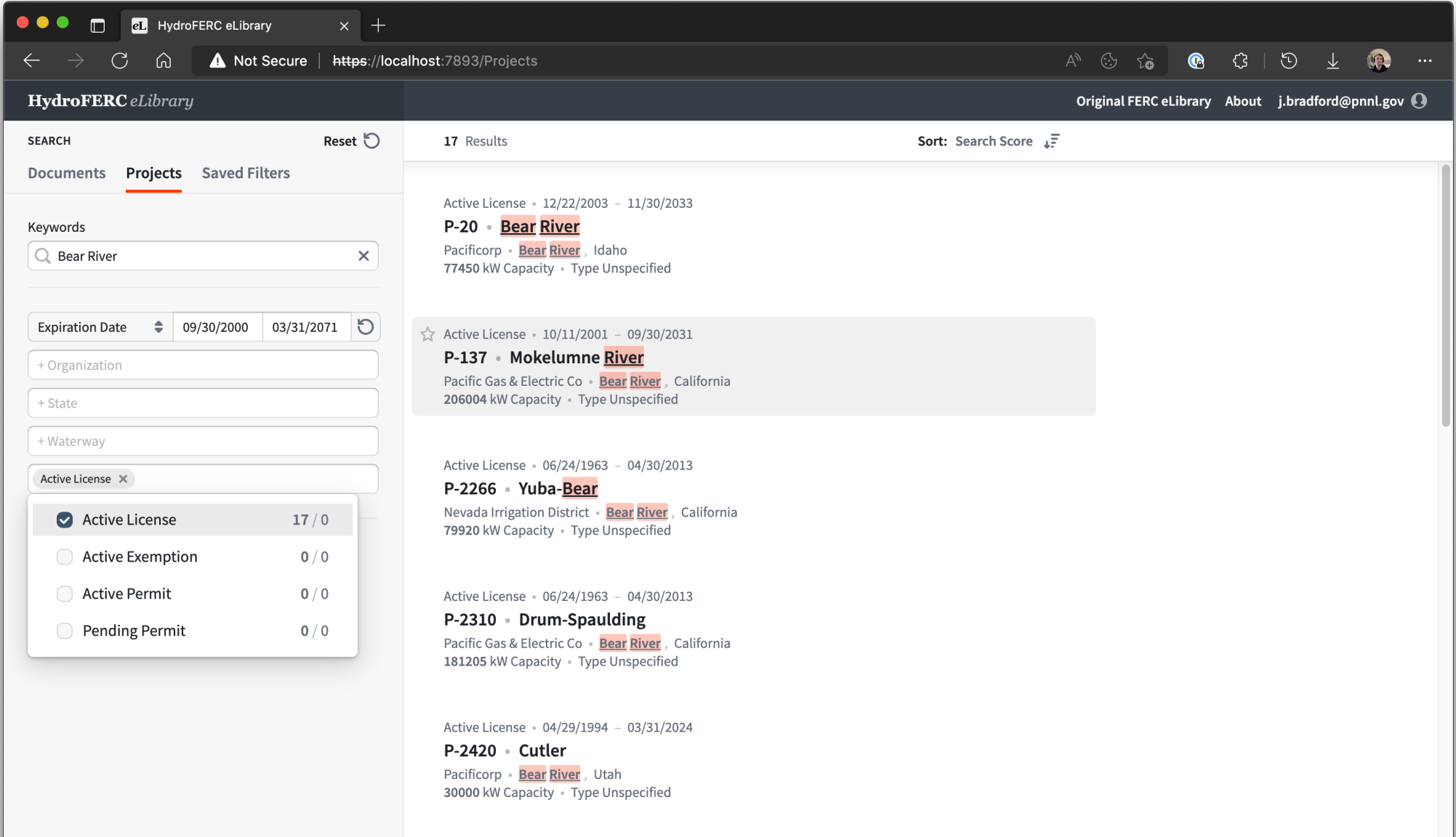
13666124.DOC

Download

Page 1

UNITED STATES OF AMERICA¹¹⁰ FERCE ^{162,231}
FEDERAL ENERGY REGULATORY COMMISSION
Pacific Gas and Electric Company
Project No. 137-061
ORDER AMENDING **LICENSE**
(Issued March 08, 2005)
On October 17, 2003, Pacific Gas and Electric Company (PG&E) filed a request to amend its **license** for the Mokelumne River Project No. 137. The **licensee** requested Commission approval to modify its project boundaries and the project description to reflect changes to the Tiger Creek Development of the Mokelumne River Project. The Mokelumne River Project is located on the Mokelumne River and its tributaries in Alpine, Amador, and Calaveras Counties in California.
BACKGROUND
The Order Modifying and Approving Dam Breaching and Dismantling Plan Under Article 404, issued February 28, 2003, approved the plan to breach the East Panther diversion dam, remove the West Panther diversion dam and to dismantle project facilities at the Beaver Creek diversion dam. ¹ By letter dated June 12, 2003, the Commission's San Francisco Regional Office authorized PG&E to begin the demolition activities at the Tiger Creek Development.
On October 17, 2003, PG&E filed a report titled "West Panther Diversion Dam Removal and East Panther Diversion Dam Breach and Beaver Creek Dismantling" pursuant to ordering paragraph (F) of the **license** which required the **licensee** to file within 3 months of the removal of the project facilities, a report documenting compliance with the approved breaching plan and revised exhibits and project description showing the facilities removed. Public notice of the proposed **license** amendment was issued August 10, 2004. The deadline to file comments, protests and motions to intervene was September 10, 2004. No

Screenshots: Project Search



Q&A