

The *Petroleum History Library*, a digital special collection developed by the Energy Museum of Ripi, Italy

Keywords: Digital Resources; Open Access; Research; Petroleum Industry History; Energy History.

Scientific domain: Digital Humanities; Energy History; Science History.

Beneficiaries: Graduate, postgraduate students, and research scholars; scientists and practitioners in the energy sector; concerned citizens interested in the past science and technology of petroleum.

Even after the access to the Internet became common practice in the daily activities of scholars, researchers, and students, those interested in deepening the petroleum history subject still experience difficulties in finding open sources and specialized digital platforms instrumental to their work.

Several digital libraries and archives have been publishing online since late 2000s an increasing number of resources useful for studies in petroleum history. But those repositories are generalist platforms conceived to offer a vast and heterogeneous array of resources. They are independent entities working in autonomy and following different protocols and methodologies. In this *mare magnum*, often petroleum related manuscripts and printed resources are not properly referenced, described, and tagged. They lack of a common organizational scheme, format, and have a rather limited quality control.

In 2020, the Energy Museum explored the possibility of creating a digital resource that could fill these voids, and determined that it was not just feasible, but highly desirable to build the Petroleum History Library (PHL). The ultimate goal was the creation of a special online collection: a virtual, ubiquitous, sustainable working space where the seeker for historical resources on petroleum can pursue an easy and targeted research.

The Museum implemented a user behavior study to collect information on how potential users of the PHL utilizes resources that are currently available on the Internet. Were conducted interviews of different types of users so that we would have information on what people do and do not like about the resources they use. On these premises, in 2021 started the creation of the Petroleum History Library, developed under the Decree May 20, 2020, n°G06026 - L.R n° 24/2019 Annual Plan 2020 issued by the Lazio Regional Administration, Division for Culture and Education.

Upon these efforts, in February 2022 it was launched online the pilot version of the Petroleum History Library, the open access and multilingual digital repository specializing in primary and secondary handwritten, printed, audio, and video resources addressed to the study of petroleum history in the pre-industrial (antiquity-1859) and industrial (1860-present) phases.

The PHL proposes itself as the one-of-a-kind digital special collection that stands out from the other existing repositories because its high level of specialization in petroleum history. It aims to collect quality resources on all the disciplines and fields, including Oil&Gas upstream, midstream, downstream, economics, law, medicine, biology, anthropology, sociology, fine arts, and gender studies relevant and beneficial to the study of petroleum history. The platform already offers contents on the petroleum past of several countries, including a selection of resources on the Americas, Europe, and Australia. The long-term goal is to feature the PHL with a set of items such as to cover the history of the petroleum industry in the five continents.

The content collection operation is implemented on three parallel tracks. The first develops on the gathering, merging, making available of resources already distributed online. The second responds

to criteria like quality, originality, and uniqueness, and bases on the identification and digitization of relevant materials not yet converted into electronic format preserved in special collections. The third involves the kind contribution of partners like learned societies, research institutes, and publishers.

The Energy Museum has already established on behalf of the PHL partnerships with several institutions and learned societies, and more are expected to be finalized in the course of 2022. These have agreed the PHL to upload their open access materials, and/or to waive the copyright on some selected materials (i.e., journal articles) and allow their publication on our platform. The provider institutions are acknowledged in every page of the library showing their resources. The PHL offers to every institution to feature on the front page of the Petroleum History Library their own logo and weblink to access their institutional site. This is a further acknowledgement for the provider institution, who can get more visibility online and further show its commitment to the open access philosophy.

Present structure, organization, and regulations of the Petroleum History Library

This appendix is written to define those aspects and characteristics useful to frame and recognize the Petroleum History Library as a digital environment with a tangible potential for researchers and educators, and which also represents an added value for the digital humanities discipline.

Univocal denomination of the Platform

PETROLEUM HISTORY LIBRARY (PHL)

Permanent Web Address

Url: <https://www.museoenergiaripi.it/petroleum-history-library/>

Managing Institution Legally Responsible for the Project

Museo dell' Energia di Ripi/Energy Museum of Ripi, a cultural institution supported by the Municipality of Ripi, Lazio Region, Italy.

Content Curator

Francesco Gerali

Platform Type

Digital library

Data Typology

Open access

Access mode

Free online access. No charge or subscription required to the user. The Energy Museum is a nonprofit educational institution funded by the Region Lazio and the Municipality of Ripi.

Aims of the Petroleum History Library

- Targeted collection, evaluation, and upload of manuscript and printed materials dated between the 16th and the 20th century.
- Continuous research in international libraries, archives, and digital repositories to identify bibliographic records.
- Normalization of the metadata by prioritizing authority records recommended by the Library of Congress.
- Use of the best procedures for the acquisition and consolidation of quality standards

internationally recognized for optimizing the development of digital libraries.

- Periodic review of catalogs, databases, and digital archives available in English, French, Spanish, German, Italian and Portuguese to make recurring content updates.
- Facilitated and functional visualization of materials through an easy-to-use graphic interface.

Potential Users

PHL is an international portal aimed at supporting the study and research of:

- Historians of science, technology, engineering, and energy
- Undergraduate, postgraduate, university, and independent researcher

Contents

All published contents are selected and reviewed by the content manager of the Energy Museum and individually tagged with normalized metadata. The main languages of the items included are to date: English, Italian, French, German, Spanish, and Romanian. The PHL includes:

- Journal Articles
- Conference proceedings
- Technical reports
- Monographs
- Book chapters
- Audio and audiovisual multimedia materials

Benefits of the Petroleum History Library users

- Availability on a single platform of a heterogeneous selection of specific resources for the study of the history of petroleum. Most of the contents are not easy to find elsewhere, and/or never previously digitized.
- A constantly growing, freely accessible portal of high-quality resources.
- Facilitation of the work of professionals in the historical disciplines.
- Added value for the education of the general public.
- PHL is a freely accessible portal in continuous development for consulting and downloading high quality resources.
- PHL offers centralized access from the search page to search all the available contents.
- Simple and immediate navigation within digital documents.
- Long-term availability of digital documents thanks to permanent links.
- Metadata is normalized using a unique style.
- Facilitated interface for resource download.

Benefits for the partner institutions

- The bibliographic section of each element identifies the partner institution that provided the resource.
- Each partner institution has its own logo and link to access the institutional site on the front page of the Petroleum History Library.
- The partner can increase the visibility to the international audience.
- Guarantee of professional IT maintenance of the platform and management of its contents.
- Long-term backup of digital documents (PDF) and secured through permanent links.

- PHL does not have authority to grant or deny permissions to use images, maps, tables, and charts from volumes that are in the public domain or open access.
- Centralized access from the search page, ability to carry out a search in all content available.
- Simple navigation inside digital documents using a clear structure.
- Long-term availability of digital documents through stable and monitored permanent links.
- Metadata are normalized using the IEEE Reference Style.
- Practical interface for downloading the resources.

Use Petroleum History Library Accessibility and utilization policies of the Petroleum History Library

- PHL resources are in the public domain and not subject to copyright. Users are free to copy, use, and redistribute the items in part or in their original length.
- The resources under copyright are made available from the PHL with explicit permission of the copyright holder.
- Anyone may access the metadata free of charge.
- The metadata may be re-used in any medium without prior permission for not-for-profit purposes.
- Anyone may access full items free of charge.
- Copies of full items can be reproduced and displayed or performed in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge.
- Full items hosted in the PHL are not sold commercially in any format or medium.
- Mention of the repository is appreciated; users are invited to utilize the citation style showed in the notes.

The Petroleum History Library as a multidisciplinary, international, and inclusive research tool

It is acknowledged by historians that studies on the development of the petroleum industry - a key research subject in the field of energy history - cannot only focus on the case histories of on some great producer countries. Rather, the case histories of minor countries that experienced many difficulties before establishing an efficient production system must also be examined. Each oil country has its own oil history, the growth of which was marked by internal economic, social, and scientific considerations and also influenced by external factors. In the oil industry history of every country, there are important episodes that influenced the course of events, while others went almost unnoticed, and were later forgotten. Each episode from every country is important because, beyond the story of successes and failures, there are countless elements that enable the historian to understand and gain new insights into the process of development of the oil industry. On the basis of that assumption, the PHL in the long term will ensure:

- The coverage of all the disciplines and fields, including Oil&Gas upstream, midstream, downstream, economics, law, medicine, biology, anthropology, sociology, fine arts, and gender studies relevant, functional, that can benefit to the study of petroleum history.
- Space and visibility to resources (textual, visive, and audio) on those countries which petroleum past and heritage has been util now little studied because of the lack of historical data and information.
- Encouragement and support to the submission of every kind of resource that can witness the work, participation, commitment, and/or contribution of women, LGBT community, natives, minorities, and persecuted/displaced people in the past of the Oil&Gas industry.

The Petroleum History Library as a place for rescue and recovery for endangered resources

The Energy Museum is an international institution networked with several museums, libraries, and archives also localized in those less developed countries where the humanities are not always endowed with the same level of funding and consideration as it happens in the western world. The Museum acknowledges the difficulties that can be experienced by some of those fellow institutions in some extraordinary situations, and the subsequent state of clear danger that could irremediably damage unique collections. The PHL is committed to guarantee digital safe space to host those digitized collections that are in the need for, both temporary or permanent, a venue to guarantee their integrity and preservation.

PHL Policy of Preservation

- Items will be retained indefinitely.
- The PHL will ensure continued readability and accessibility.
- Items may be removed at the request of the author/copyright holder.
- The PHL regularly backs up its files according to current best practice.
- The original bit stream is retained for all items, in addition to any upgraded formats.
- Reasons for content withdrawal may include proven copyright violation or plagiarism.
- Withdrawn items are deleted entirely from the database and the metadata of withdrawn items will not be searchable.
- In the event of the repository being closed, the database will be preserved and transferred to another public host.