XBRL for regulators and utilities
Course Information for: XBRL for Regulators and Utilities

- **Course Overview** – In this course, attendees will gain a basic understanding eXtensable Business Reporting Language (XBRL). By the end of the course the student will have a fundamental grasp of what XBRL is, its structure, and what challenges an analyst or auditor will encounter when using data provided in XBRL.

- **Intended Audience** – This course is intended for students in the field of rate regulation that want to become more familiar with XBRL and how it can be used by regulators and even the companies themselves.

- **Learning Objectives** – After this course, the student will have a foundational understanding XBRL and its use in regulatory reporting and oversight along with its use in audits and rate cases.

- **Course Level** – Basic

- **Course Prerequisites** – None

- **Advance Prep** – None

- **Delivery Method** – Online Group Live

- **NASBA National Registry Statement** -- The Institute of Public Utilities is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State Boards of Accountancy have the final authority on the acceptance of individual course for CPE credit. Complaints regarding registered sponsors may be submitted to the National Registry of CPE Sponsors through its website: [www.nasbaregistry.org](http://www.nasbaregistry.org).

- **This course is eligible for CPE credit.**
How was XBRL born?
How was XBRL born?

XBRL was first conceived by a CPA named Charles Hoffman in Tacoma, Washington in April 1998.... 25 years ago!
Why can’t we use current web-based technology to transfer financial data from one computer-based platform to another without conversion or human interaction?

How was XBRL born?
How was XBRL born?

- Use the same “Markup Language” that Internet Web Pages use:
  - eXtensible Markup Language (XML)

- Charlie’s Idea

- No Rekeying or Re-entering Data

- The Automatic Validation of Data

- Data could be “Tagged” with Relevant Meta-data
How was XBRL born?

In July 1998, the chairperson of the AICPA High Tech Task Force, contacted Charlie and him to brief the Task Force on his idea.
How was XBRL born?

January 1999, the AICPA released its first prototype!

XFRML – eXtensible Financial Reporting Markup Language.
How was XBRL born?

**April 2000** AICPA and the soon to be “XBRL International*” officially unveiled the first working model of XBRL at press conference in New York City

* XBRL International was created in 2001
How was XBRL born?

- In **February 2001**, XBRL International held its first conference in London with 10 countries attending and over 80 companies,
How was XBRL born?

• **February 2001**, The International Accounting Standards Board released a draft of the first comprehensive XBRL taxonomy,

• Federal Deposit Insurance Corporation (FDIC) joins XBRL International
History of XBRL

In 2006 the SEC revamped EDGAR (SEC reporting system) to support XBRL at the cost of $54 million.
How was XBRL born?

In April 2009, the U.S. Securities and Exchange Commission (SEC) mandated that public companies adopt the eXtensible Business Reporting Language (XBRL) for financial reporting over three phase-in periods.

Companies will provide their financial statements to the Commission and on their corporate Web sites in interactive data format using the eXtensible Business Reporting Language (XBRL). The interactive data will be provided as an exhibit to periodic and current reports and registration statements, as well as to transition reports for a change in fiscal year. The new rules are intended not only to make financial information easier for investors to analyze, but also to assist in automating regulatory filings and business information processing. Interactive data has the potential to increase the speed, accuracy and usability of financial disclosure, and eventually reduce costs.
The Four Facets of XBRL
Purpose

Governance

XBRL

Users

Structure and Rules
Purpose of XBRL

The purpose of XBRL is to structure economic, financial, and business information & data in such a way so that it can be efficiently and effectively collected, prepared, and communicated, thus resulting in efficient and effective review and analysis.
Purpose of XBRL

The purpose of XBRL is to structure economic, financial, and business information & data in such a way so that it can be efficiently and effectively collected, prepared, and communicated resulting in an efficient and effective review and analysis.

Not just financial and economical statistical data but also “information”!
The purpose of XBRL is to structure economic, financial, and business information & data in such a way so that it can be efficiently and effectively collected, prepared, and communicated resulting in an efficient and effective review and analysis.

6 Steps in “Data Prepping” Data

- Collection
- Classification
- Cleaning
- Structuring
- Transformation
- Validation

Data scientists spend 60% of their time on cleaning and organizing data. Collecting data sets comes second at 19% of their time, meaning data scientists spend around 80% of their time on preparing and managing data for analysis.

Forbes: Cleaning Big Data (forbes.com)
A 2004 study to test the effectiveness of XBRL
An amazing 85% drop in the time to prepare reports!
Purpose of XBRL

The purpose of XBRL is to structure economic, financial, and business information & data in such a way so that it can be efficiently and effectively collected, prepared, and communicated resulting in an efficient and effective review and analysis.
Purpose of XBRL

- interactive-data is data which is “labelled” or “tagged” with additional information (metadata).

One of the goals of XBRL is the conversion of paper, pdf, and html-based documents into interactive-data based on an universally accepted standard.

- This not only increases accessibility, but the conversion itself can provide validation of the data resulting in increased reliability and accurately.
Poll Question

What are NOT a step in the preparation of data before analysis can begin?
1. Collection
2. Cleaning
3. Validation
4. Cleaning and Alterations
Purpose

Governance

XBRL

Structure and Rules

Users
Governance

XBRL
XBRL International Governance

**XBRL International** is a global entity with a stated purpose to improve the accountability and transparency of business performance globally by providing an open-data exchange-standard for business reporting. (xbrl.org)

**XBRL International**
- Is a not-for-profit membership corporation.
- Created in 2001
- Oversight is provided by an eight-member Board of Directors which are approved by the Member Assembly.
- Made up of 27 country-specific jurisdictions
XBRL US, Inc. supports the implementation of XBRL business reporting standards for use by U.S. public and private sectors. (xbrl.us)

**XBRL US**
- Is the United States jurisdiction of XBRL International.
- Originally was a committee of the American Institute of CPAs (AICPA) until September 2006,
- After 2006, became a separate nonprofit entity - 501(c)(6).
IPU/MSU – XBRL FOR REGULATORS AND UTILITIES 2022

Purpose

Governance

XBRL

Users

Structure and Rules
Governments
Regulators

Users

- Governments
- Regulators
- Companies
- Data compilers
- Analyst
- Investors
- Accountants and Auditors
Governments
Regulators

• Financial regulators – Banking and Financial markets
• Economic Regulators – Rate-setting agencies
• Securities regulators and stock exchanges
• Business registrars: Corporate data about private and public companies – Sec of State
• Tax authorities – State and Federal
• Statistical and monetary policy authorities
XBRL is the international standard for digital business reporting, used around the world, by more than 60 countries.
Structure and Rules

XBRL is a nonproprietary, open source, platform-independent system for data reporting.

**NONPROPRIETARY**—means

- No one can own it!
- No one is making a profit selling it
- No one is preventing its use,
- Whereas **Proprietary** means it is vendor-owned and is either not public and a payment must be made for its use.
XBRL is a nonproprietary, open source, platform-independent system for data reporting.

**OPEN SOURCE** – means

- Freely obtainable source code!
  - Its **OPEN** to whomever wants to use it!
- **BUT** there are restrictions on modifications
- Restrictions on redistribution
- Restrictions on making money using the code
Structure and Rules

XBRL is a nonproprietary, open source, platform-independent system for data reporting.

Platform Independent – means

- XBRL can be used on machines with a variety of hardware platforms or software architectures!
  - Examples of different hardware platforms
    - Windows, Linux, Mac, Android
  - Examples of different software platforms
    - Oracle, SAP, Power BI, Excel
**Structure and Rules**

XBRL is based on the same “markup language” that the internet uses - XML.

A **Markup Language** is a system for annotating text in a way which that adds information but is distinguishable from text itself.

XML (Extensible Markup Language) is a **Markup language** and file format:

- For storing, transmitting, and reading data,
- Defines rules for encoding documents in a format that is both human-readable and machine-readable.
XBRL is based on the same "markup language" that the internet uses - XML.
Structure and Rules

XBRL is based on the same “markup language” that the internet uses - XML.

AMENDATORY SECTION (Amending Docket A-081419, General Order R-554, filed 12/23/08, effective 1/23/09)

WAC 480-93-999 Adoption by reference. In this chapter, the commission adopts by reference each of the regulations and/or standards identified below. Each regulation or standard is listed by publication, publisher, scope of what the commission is adopting, effective date of the regulation or standard, the place within the commission’s rules the regulation or standard is referenced, and where to obtain the regulation or standard.

(1) Parts 191, 192, 193, and 199 of Title 49 Code of Federal Regulations, including all appendices and amendments thereto as published by the United States Government Printing Office.

(a) The commission adopts the version of the above regulations that were in effect on (September 2, 2008) October 1, 2009, except the following sections are not adopted by reference: 191.1, 192.1(a), 193.2001(a), 199.1. In addition, please note that in WAC 480-93-013, the commission includes “new construction” in the definition of “covered task,” as defined in 49 CAR § 192.801 (b)(2).

(b) This publication is referenced in WAC 480-93-005, 480-93-080, 480-93-100, 480-93-110, 480-93-124, 480-93-155, 480-93-170, 480-93-180, and 480-93-18601.

(c) (The Code of Federal Regulations is published by the federal government.) Copies of Title 49 Code of Federal Regulations are available from (most Government Printing Offices, including the Seattle office of the Government Printing Office, as well as from various third party vendors and various libraries; including the branch of the state library located at the commission) the U.S. Government Online Bookstore, http://bookstore.gpo.gov/. It is also available for inspection at the commission.

(2) Section IX of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code.

Structure and Rules

**XML Coding**

*Bold>Frog Water</Bold>*

**Presentation**

Frog Water

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**XML Coding**

*Company Name> Frog Water </Company Name>*

**Concept**

Company Name = Frog Water
The World Wide Web Consortium (W3C) is an international community that develops open standards to ensure the long-term growth of the Web.
XML is a standardized language that has a set of rules that are used to create and define other languages such as XBRL.

XBRL, based on XML, also has its own set of rules!
Structure and Rules

Essential XBRL Document Files

- Instance Document
- Taxonomy

Based on XML and XBRL rules
Structure and Rules

This document consists of a company's specific reporting information and Tags each piece with metadata.
Structure and Rules

Instance Document

- Rounding (000)
- US GAAP
- Service Lines (Concept)
- Date – as of 12/31/2021
- Tagged!
- Company Name
- Currency - $
Structure and Rules

Essential XBRL Document Files
• Instance Document
• Taxonomy
Figure 7. Synonym conflict in IPNI and NCBI. Name cluster containing “Antennaria solitaria” and “Antennaria monocepala” produced by TBMap [8]. Antennaria solitaria and Antennaria monocepala are synonyms in IPNI, but are treated as distinct taxa by NCBI. In such cases, Phylominer uses the NCBI classification.
### Electric Plant in Service (Account 101, 102, 106, and 108)

1. Report below the original cost of electric plant in service according to the prescribed accounts.
2. In addition to Account 101, Electric Plant in Service (Classified), this page and the next include Account 102, Electric Plant Purchased or Sold, Account 103, Experimental Electric Plant Unclassified, and Account 106, Completed Construction Not Classified-Electric.
3. Include in column (e) or (d), as appropriate, corrections of additions and retirements for the current or preceding year.
4. For revisions to the amount of initial asset retirement costs capitalized, included in primary plant account, increases in column (e) additions and reductions in column (d) adjustments.
5. Enclose in parentheses credit adjustments of plant accounts to indicate the negative effect of such accounts.
6. Classify Account 101 in accordance with prescribed accounts, on an estimated basis if necessary, and include the entries in column (c) also to be included in column (c) are entries for reversals of tentative distributions of the prior year reported in column (b).
7. Likewise, if the respondent has a significant amount of plant retirements which have not been classified to primary accounts at the end of the year, include in column (d) a tentative distribution of such retirements, on an estimated basis, with appropriate contra entries to the account for accumulated depreciation provision. Include also in column (d) distributions of these tentative classifications in column (e) and (d), including the reversals of the prior years tentative account distributions of these amounts. Careful observance of the above instructions and the facts of Accounts 101 and 106 will avoid serious errors in the reported account of the retirements actually in service at end of year.
8. Show in columns distributions or transfers within utility plant accounts. Include also in column (e) the additions or reductions of primary account classifications arising from distribution of amounts initially recorded in Account 102, include in column (d) the amount with respect to an accumulated provision for depreciation, acquisition adjustments, etc., and column (f) only the effect to the credits or debits distributed in column (e) to primary account classifications.
9. For Account 106, state the nature of provision of plant included in this account and if subsidiary in account or account classification by account classification or account classification of such plant conforms to the requirements of these pages.

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<td>(351) Energy Storage Equipment</td>
<td>(352) Structures and Improvements</td>
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Essential XBRL Document Files

- Instance Document
- Taxonomy

Structure and Rules
### Essential XBRL Document Files
- **Instance Document**
- **Taxonomy**

#### Structure and Rules

**Energy Storage Equipment Transmission Plant [Abstract]**

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**Labels**

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**References**

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**Custom Type Information**

This concept does not have a custom type definition.
FERC Annual Reports

Pre-XBRL Annual Reports

• Number of Pages
  • 260 Pages - 520 Pages

• No Validation of:
  • Operating Data
  • Financial Data

• Format:
  • Paper
  • PDF
  • FoxPro Data
Poll Question

What does XBRL mean?
1. eXternal Business Review Language
2. eXtended-Block Reviewed Ledger
3. eXtensible Business Reporting Language
4. eXpense & Business Reporting Ledger
The FERC & XBRL Contemplation and Adoption
In April of 2015 FERC Issued an Order Instituting a Proceeding to Develop Electronic Filing Protocols for Commission Forms

Key Term:
**Visual FoxPro** – FERC adopted 1997, MS support ended 2015
FERC Annual Reports

In April of 2015 FERC Issued an Order Instituting a Proceeding to Develop Electronic Filing Protocols for Commission Forms

Key Terms:
EQR – Electric Quarterly Reports

5. The Commission believes that the current industry standard for submission of electronic data, such as that captured in its forms, is XML format. XML data format has significant advantages over other approaches: it is non-proprietary, and would establish a single standard for nearly all Commission forms while also providing consistency with the current eTariff and EQR systems. XML format facilitates the sharing of data across different information systems, particularly via the Internet, by structuring the data using tags to identify particular data elements.
February 22, 2019, The Federal Energy Regulatory Commission (FERC) issued a Request for Proposal to begin the transition to an XBRL based electronic regulatory filing system.
In June 2019 FERC implemented a Final Rule adopting XBRL as the standard for filing annual and quarterly reports.
FERC Annual Reports

Order for Technical Conference (172 FERC §61,059)

In this order, we adopt the Commission’s final XBRL taxonomy, protocols, implementation guide, and other supporting documents. We also establish the implementation schedule for filing Commission Forms using the XBRL process. Specifically, we will require the Commission Forms to be submitted using the XBRL process, starting with the third quarter of 2021...
FERC converts to XBRL in 2022!!
Special Guest Presenter

Hudson Hollister
Founder and CEO

HData's platform is the first to use energy regulatory reports in the XBRL format to create instant comparisons, analyses, and insights.
Thank you
For Your Time
Thank you!!!
Ask questions!
Please....

Use the Chat or Question Function
Everyone!!
Thank you for attending!
FERC XBRL