XBRL for regulators and utilities

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Michigan State University

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.
- This course is eligible for CPE credit.

"All through my life I've had this stran ng
on in the world, something big, eve

Buckminster Fuller created the "Knowledge Doubling Curve" which he showed

- Until 1900 human knowledge doubled approximately every century.
- By the end of the 1940s knowledge was doubling every 25 years.
- Today on average, human knowledge is doubling every 13 months.
- NOW:
- With the internet and related technology, it is now estimated the doubling of knowledge every 12 hours.

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn. – Alvin Toffler

(Future Shock 1970)

Every company has big data in its future and every company will eventually be in the data business." – By Thomas H. Davenport

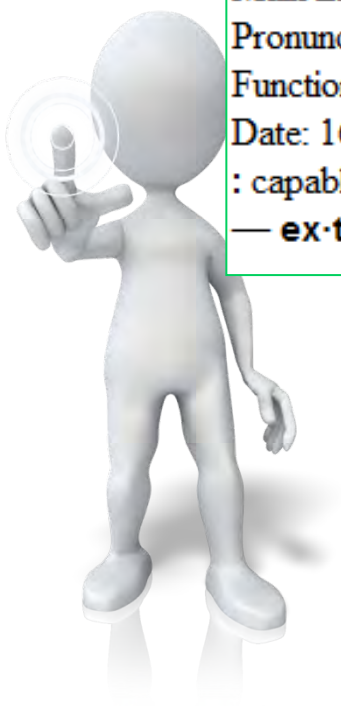
"You can have data without information, but you cannot have information without data." – By Daniel Keys Moran

Implementations are increasingly using XBRL to work with very large data sets.

The XBRL Standard / XBRL & Big Data

Just what does “XBRL” mean?

eXtensable Business Reporting Language



Main Entry: **ex·ten·si·ble**
Pronunciation: \ik-'sten(t)-sə-bəl\
Function: *adjective*
Date: 1603
: capable of being extended
— **ex·ten·si·bil·i·ty** \-ˌsten(t)-sə-'bi-lə-tē\ *noun*

Just what does “XBRL” mean?

eXtensable Business Reporting Language

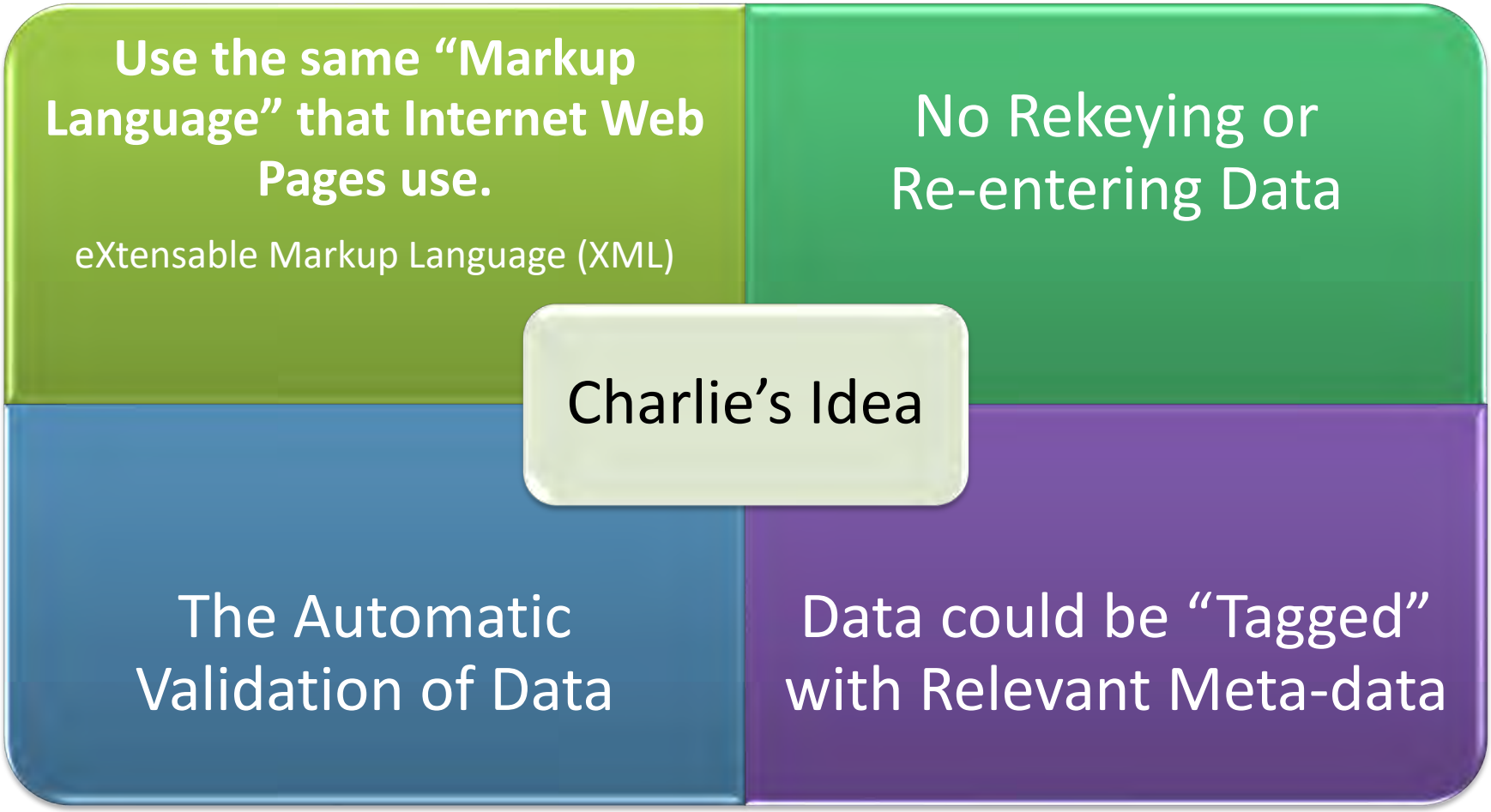
It’s an XML-based
Structured-Data language

So, how was XBRL born?

So, 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?

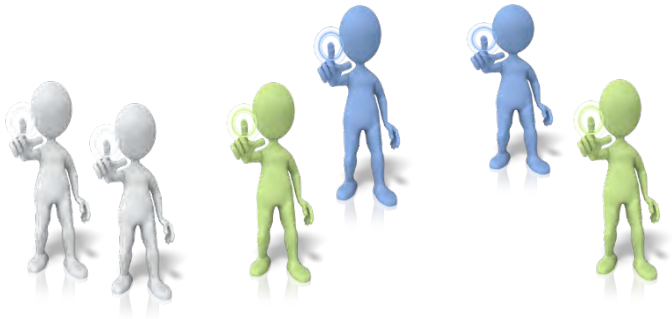

Use the same “Markup Language” that Internet Web Pages use.
eXtensable Markup Language (XML)
No Rekeying or Re-entering Data
Charlie’s Idea
The Automatic Validation of Data
Data could be “Tagged” with Relevant Meta-data

In July 1998, the chairperson of the AICPA High-Tech Task Force, contacted Charlie and had him brief the Task Force on his idea.

January 1999, the AICPA released its first prototype!

XFRML – eXtensible Financial Reporting Markup Language.

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

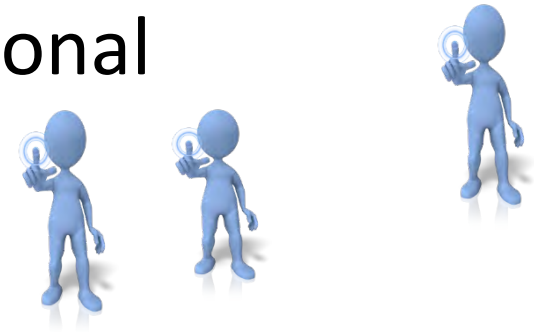


* XBRL International was created in 2001

- In **February 2001**, XBRL International held is first conference in London with 10 countries attending and over 80 companies,

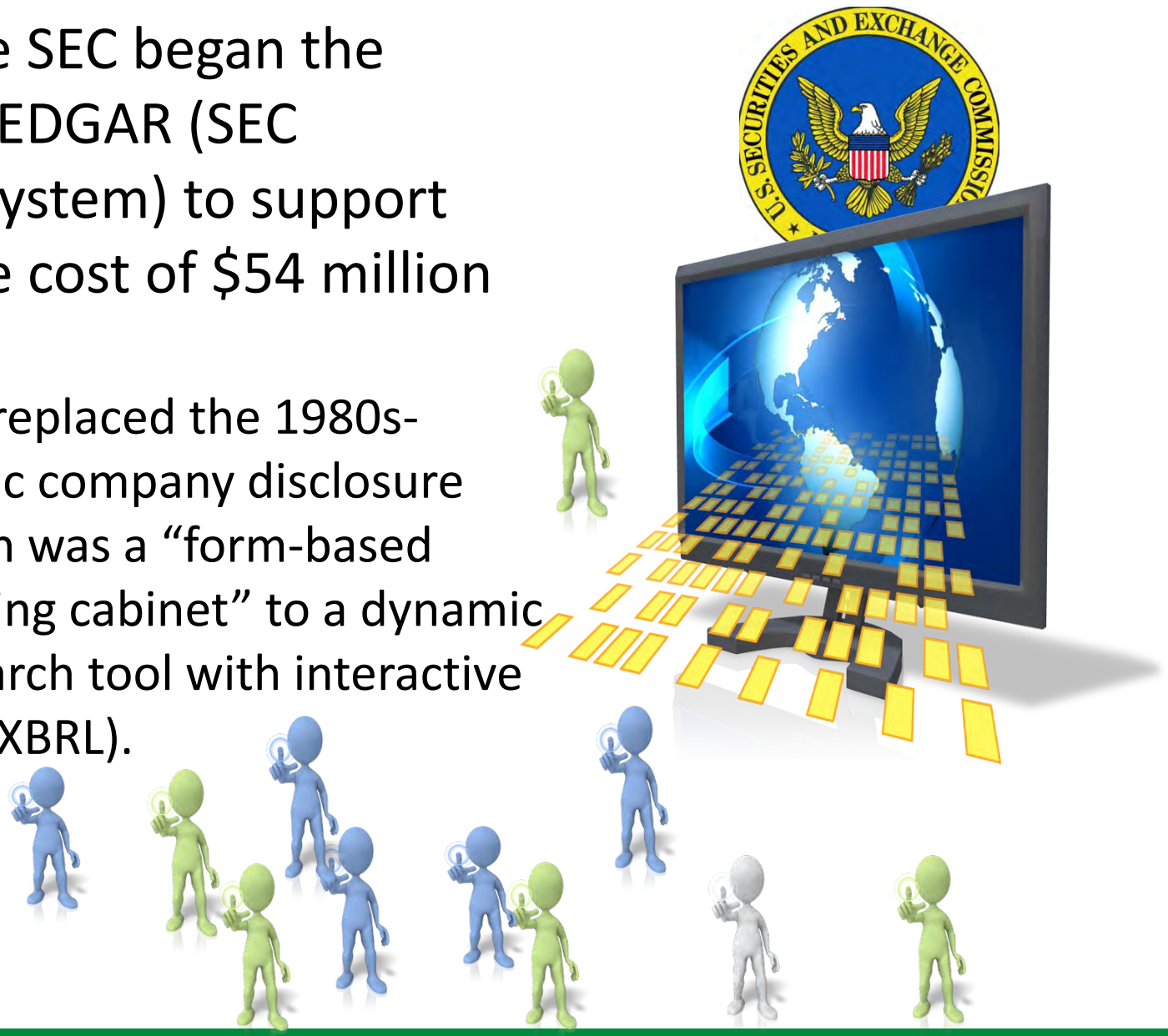
- **February 2001**, The International Accounting Standards Board (IFRS) released a draft of the first comprehensive XBRL taxonomy,

- Federal Deposit Insurance Corporation (FDIC) joins XBRL International



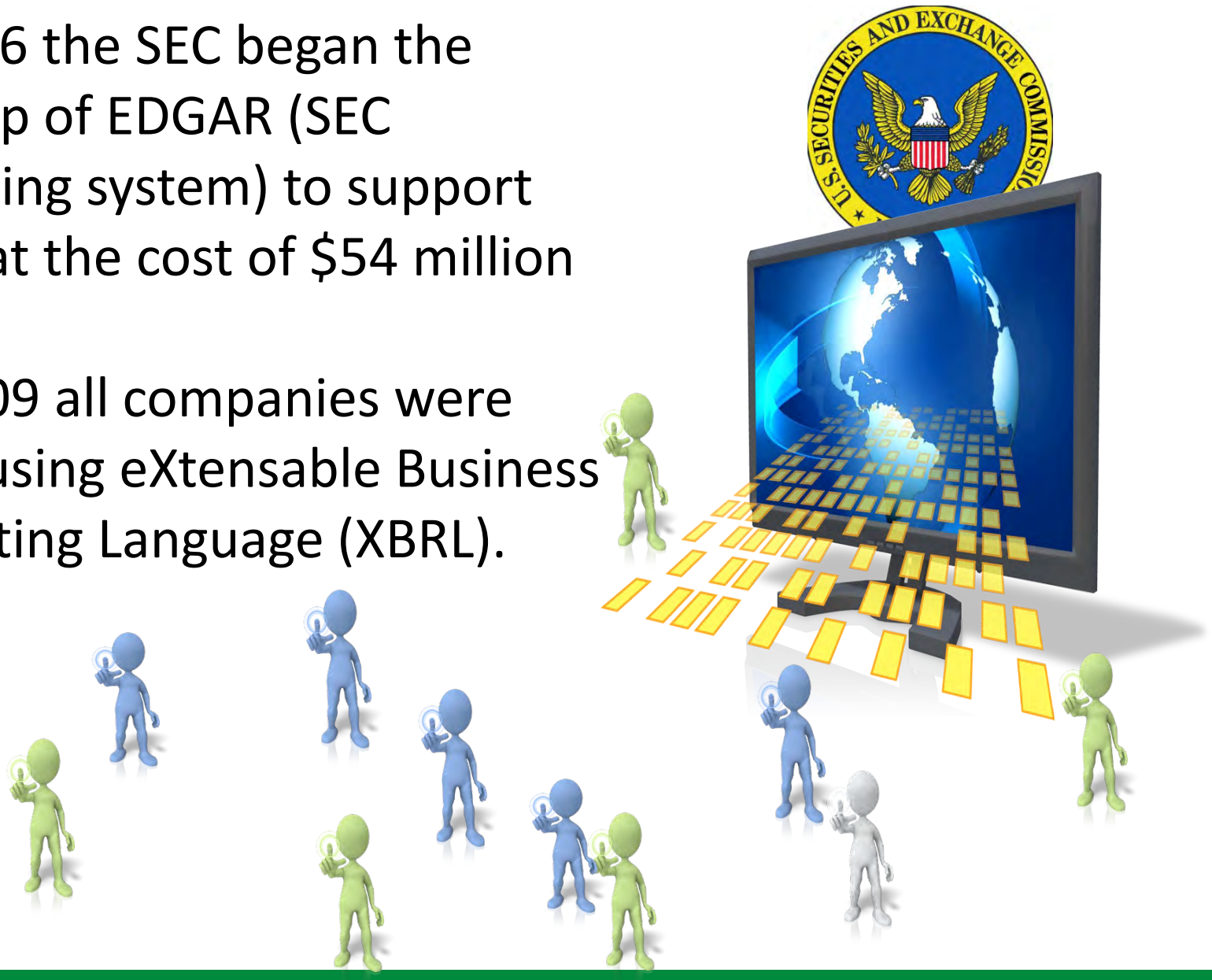
In 2006 the SEC began the revamp of EDGAR (SEC reporting system) to support XBRL at the cost of $54 million

This project replaced the 1980s-vintage public company disclosure system which was a “form-based electronic filing cabinet” to a dynamic real-time search tool with interactive capabilities (XBRL).



In 2006 the SEC began the revamp of EDGAR (SEC reporting system) to support XBRL at the cost of $54 million

By 2009 all companies were filing using eXtensable Business Reporting Language (XBRL).



Poll Question

Who is this guy? (Hint: He was a good friend of Leonardo da Vinci).

1. Drew Taggart
2. Luca Pacioli
3. Natsu Dragneel
4. Jean-Luc Picard

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Luca wrote the first known description of double-entry accounting in 1494. His writing help spread the method, commonly called the Venetian method, throughout Europe.

The Four Facets of XBRL

Purpose

Governance

XBRL

Users

Structure and Rules

Purpose

XBRL

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.

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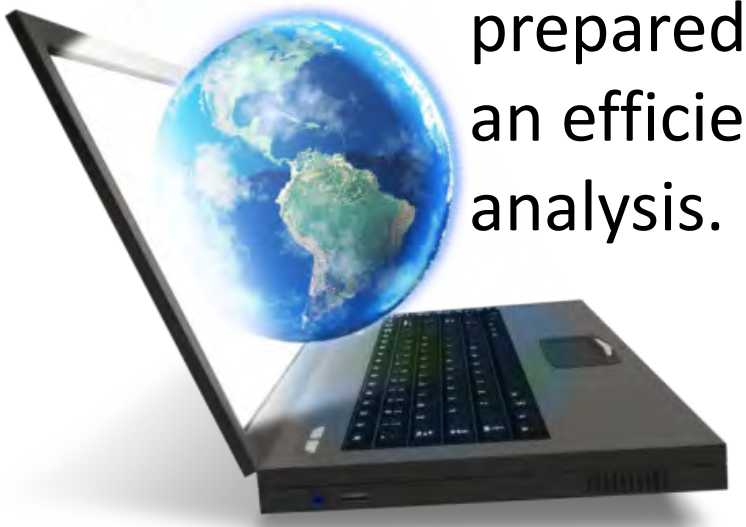


Not just financial and economical statistical data but also "information"!

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)

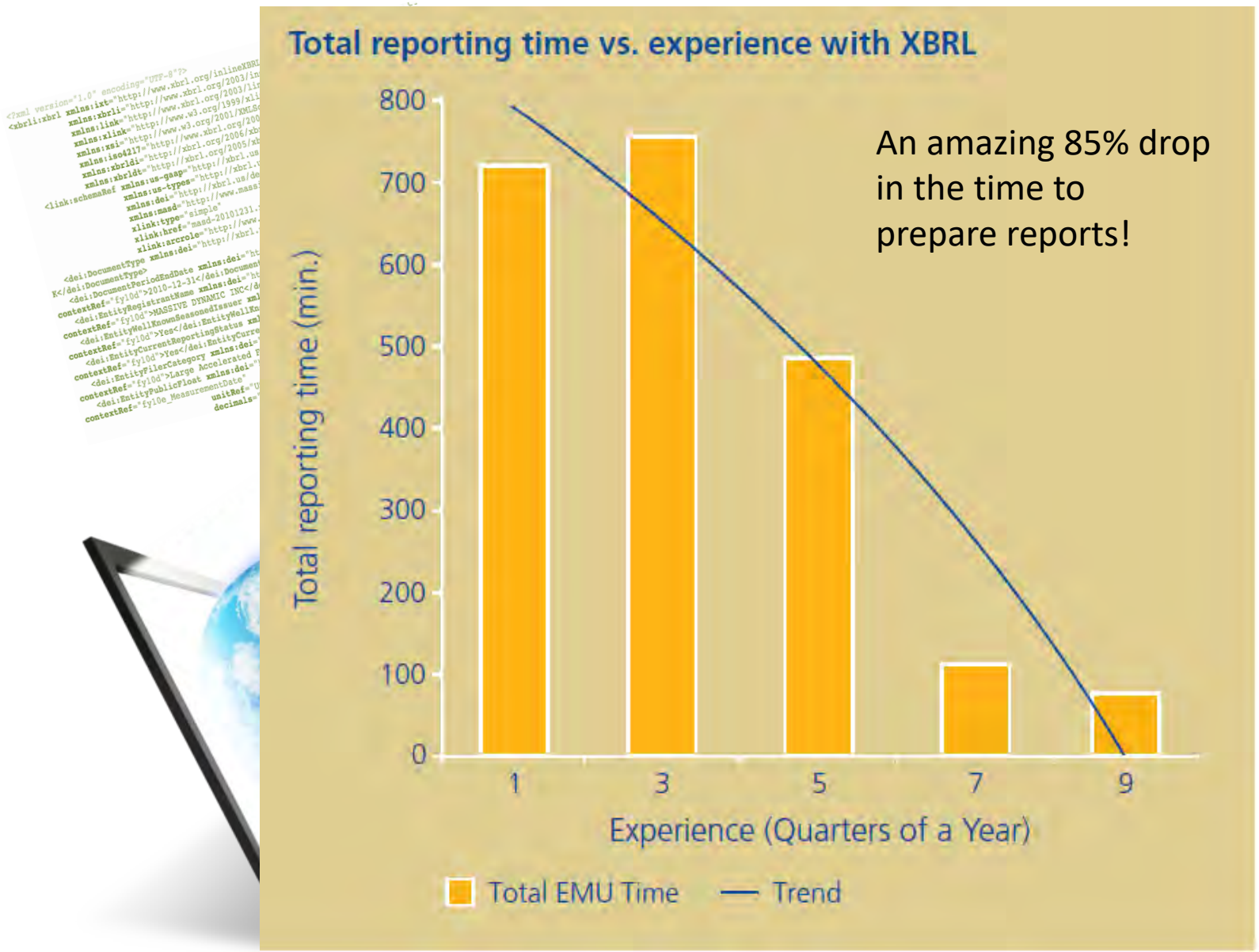
Deloitte.

Consulting

Impact of eXtensible Business Reporting Language on the administrative burden of organizations

A case study of the Dutch Water Boards

A 2004 study to test the effectiveness of XBRL


Total reporting time vs. experience with XBRL
Total reporting time (min.)
800
700
600
500
400
300
200
100
0
1
3
5
7
9
Experience (Quarters of a Year)
Total EMU Time
Trend
An amazing 85% drop in the time to prepare reports!

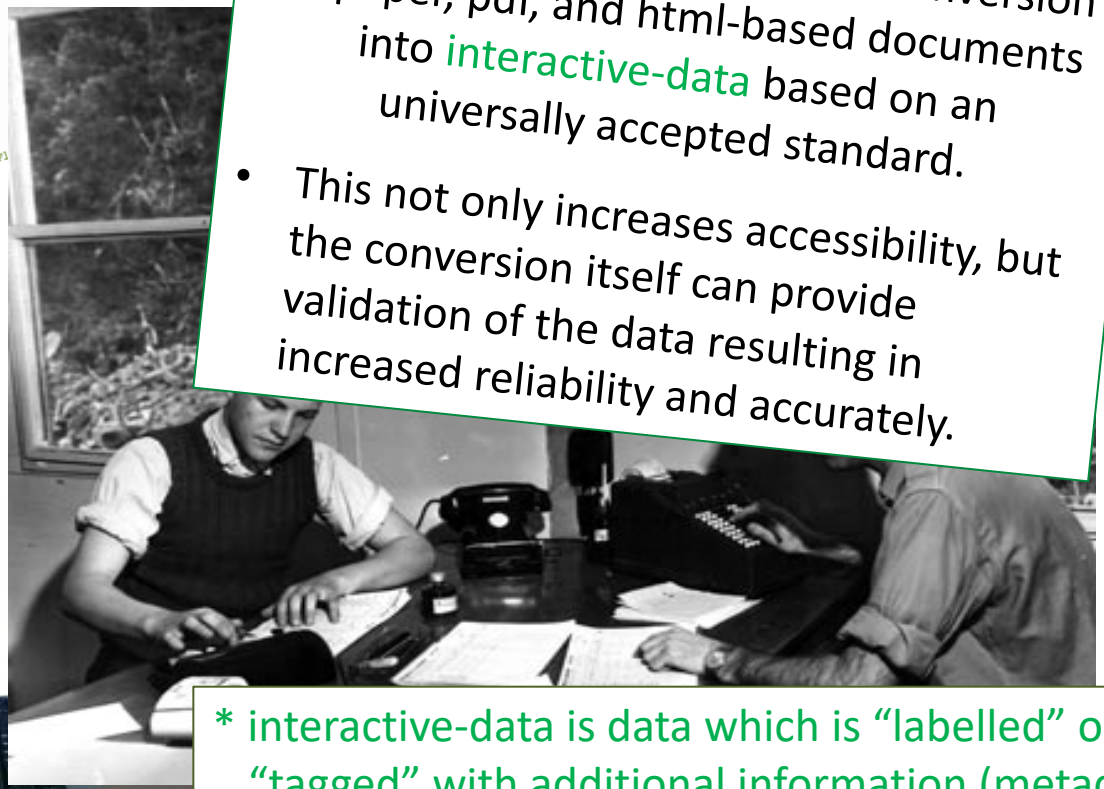
Purpose of XBRL

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**.

Pu

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.



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

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

Poll Question

What are NOT a step in the preparation of data before analysis can begin?

1. Collection
2. Cleaning
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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.

Governance

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).

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XBRL

Users

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

Governments

Accountants & Auditors

A large portion of structured data using XBRL are financial and accounting data including financial statements and audit notes.

Note: XBRL is not limited to financial or accounting information but can include operating statistics and other relevant data.

Users

- Governments
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Purpose

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Structure and Rules

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Structure and Rules

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.

Structure and Rules

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.

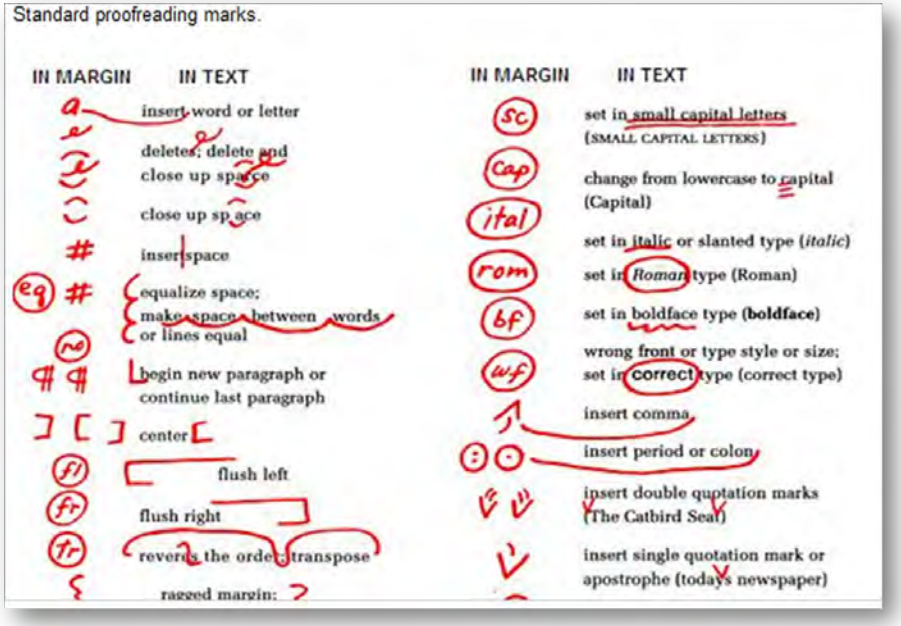
A Markup Language is a system for annotating text in a way which that adds information but is distinguishable from text itself.

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.

Structure and Rules

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.

(a) The commission adopts the ((~~2001~~)) 2004 edition of Section IX of the ASME Boiler and Pressure Vessel Code, including addenda through July 1, 2005.

Structure and Rules

XML Coding

<Bold>Frog Water</Bold>

Presentation

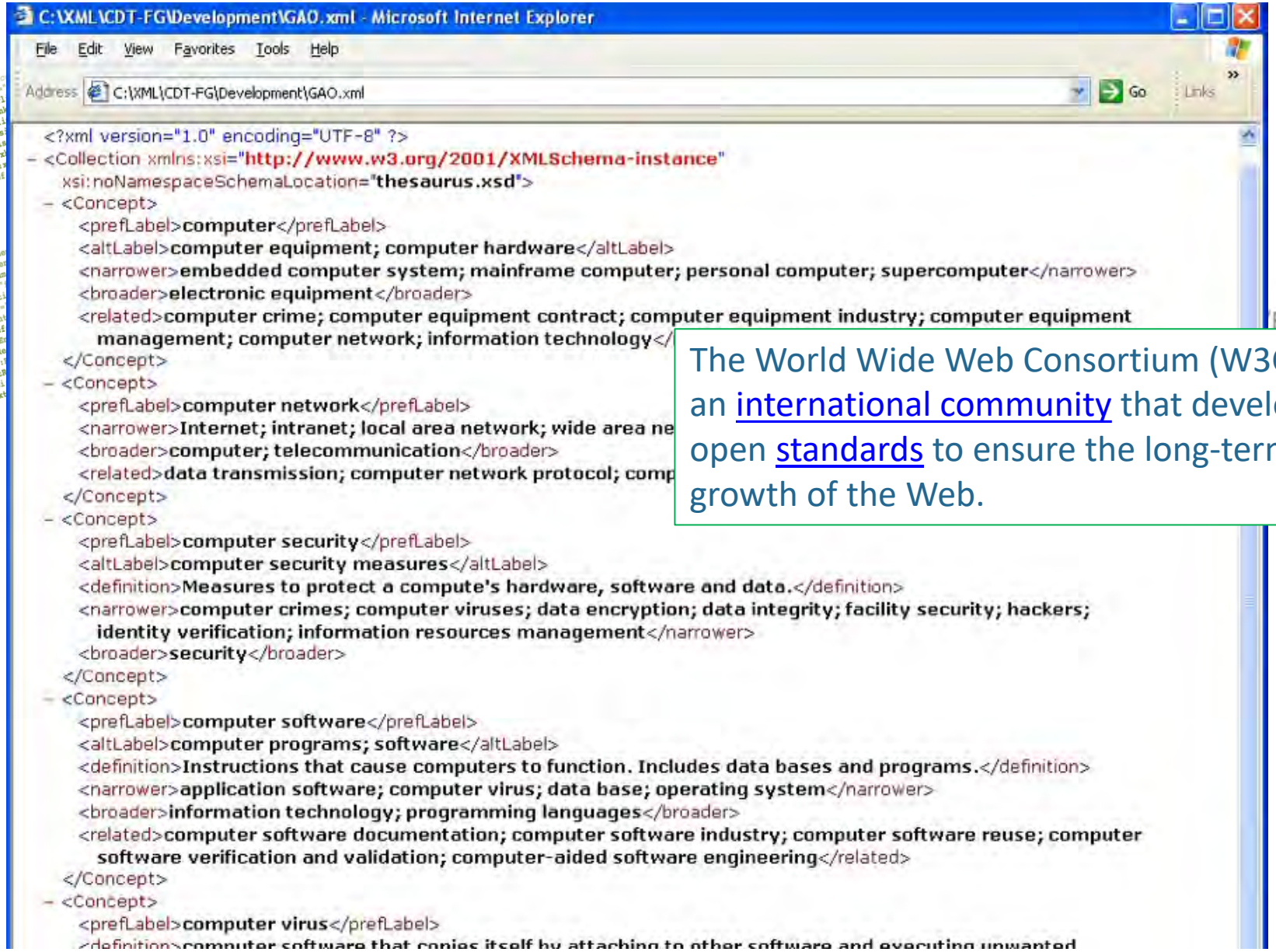
Frog Water

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.

Structure and Rules

XML is a standardize 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

XML is a standardize language that has a set of **rules** that are used to create and define other languages such as XBRL

XML is a **metalanguage**, a language that allows the creation of another markup language …Like XBRL!

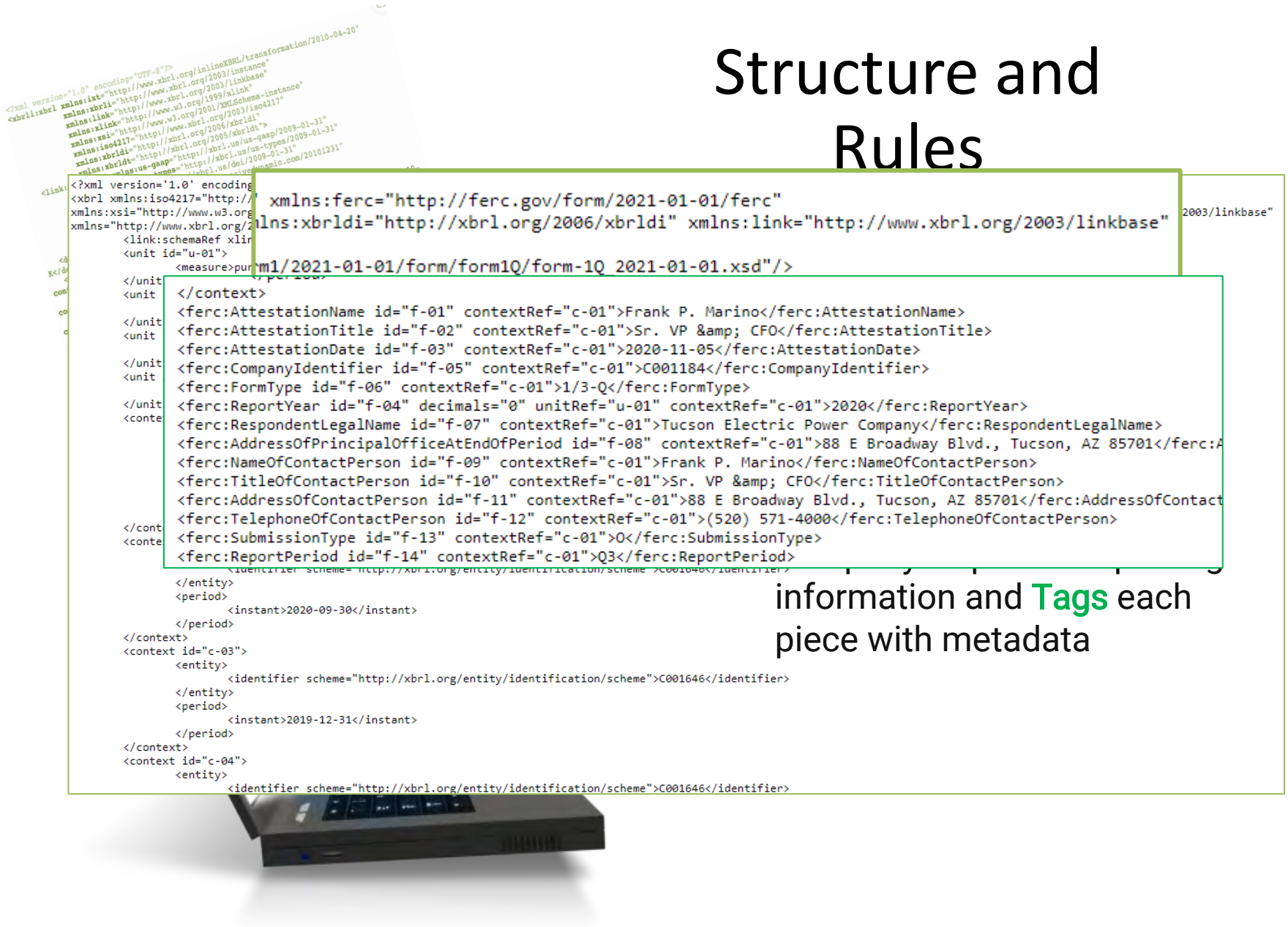
Structure and Rules

Essential XBRL Document Files

- Instance Document
- Taxonomy

Based on XML and XBRL rules

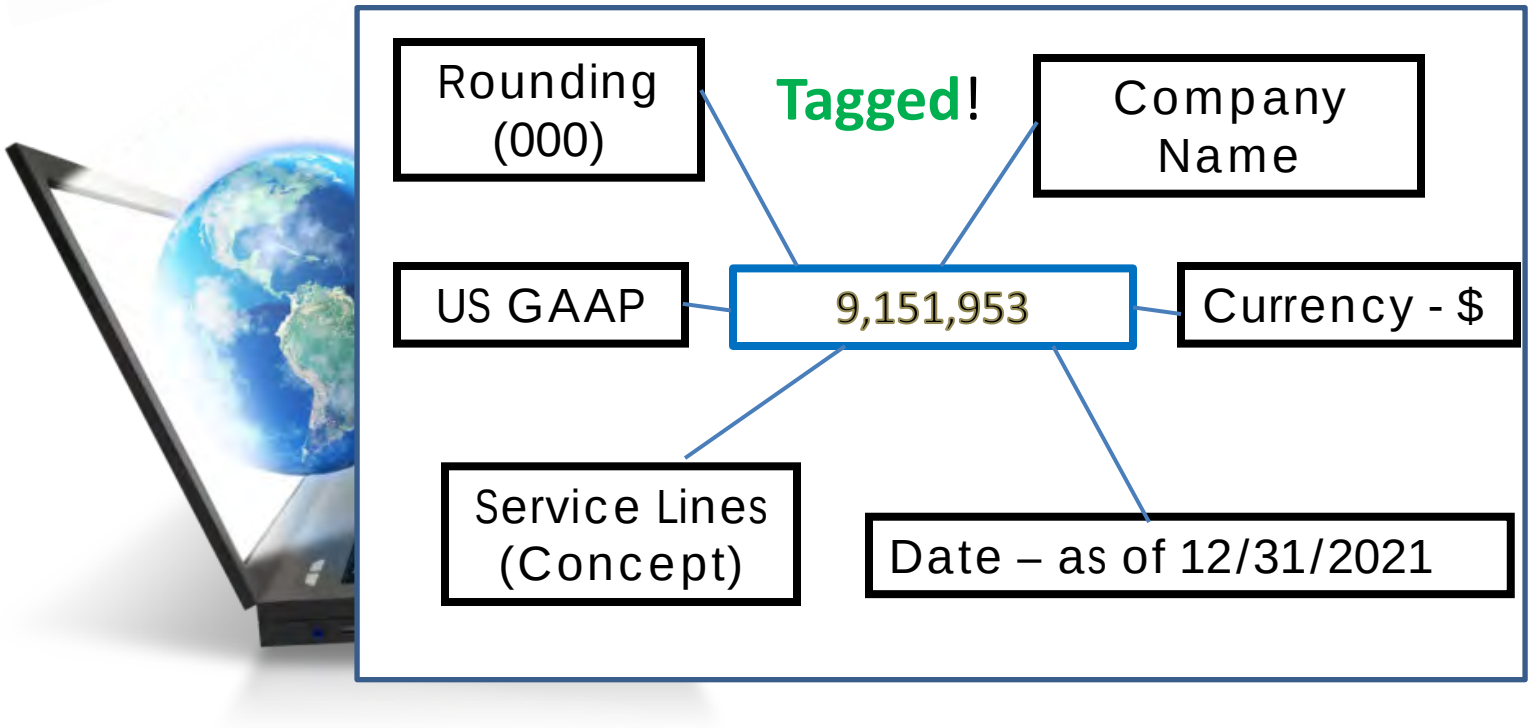
Structure and Rules



information and **Tags** each piece with metadata

Structure and Rules

Instance Document



Structure and Rules

Instance Document

Note: The reporting company is responsible for producing the Instance Document

```
</context>
<ferc:AttestationName id="f-01" contextRef="c-01">Frank P. Marino</ferc:AttestationName>
<ferc:AttestationTitle id="f-02" contextRef="c-01">Sr. VP &amp;amp; CFO</ferc:AttestationTitle>
<ferc:AttestationDate id="f-03" contextRef="c-01">2020-11-05</ferc:AttestationDate>
<ferc:CompanyIdentifier id="f-05" contextRef="c-01">C001184</ferc:CompanyIdentifier>
<ferc:FormType id="f-06" contextRef="c-01">1/3-Q</ferc:FormType>
<ferc:ReportYear id="f-04" decimals="0" unitRef="u-01" contextRef="c-01">2020</ferc:ReportYear>
<ferc:RespondentLegalName id="f-07" contextRef="c-01">Tucson Electric Power Company</ferc:RespondentLegalName>
<ferc:AddressOfPrincipalOfficeAtEndOfPeriod id="f-08" contextRef="c-01">88 E Broadway Blvd., Tucson, AZ 85701</ferc:A
<ferc:NameOfContactPerson id="f-09" contextRef="c-01">Frank P. Marino</ferc:NameOfContactPerson>
<ferc:TitleOfContactPerson id="f-10" contextRef="c-01">Sr. VP &amp;amp; CFO</ferc:TitleOfContactPerson>
<ferc:AddressOfContactPerson id="f-11" contextRef="c-01">88 E Broadway Blvd., Tucson, AZ 85701</ferc:AddressOfContact
<ferc:TelephoneOfContactPerson id="f-12" contextRef="c-01">(520) 571-4000</ferc:TelephoneOfContactPerson>
<ferc:SubmissionType id="f-13" contextRef="c-01">O</ferc:SubmissionType>
<ferc:ReportPeriod id="f-14" contextRef="c-01">Q3</ferc:ReportPeriod>
```

Structure and Rules

Instance Document

Before the instance document is submitted – XBRL provides for the Validation of Data in four aspects!

Correctness –

- Is the use of XML and XBRL syntax & structure correct
- Is it consistent with the required Taxonomy
- It does not know if the data itself is correct!

Structure and Rules

Instance Document

Before the instance document is submitted – XBRL provides for the Validation of Data in four aspects!

Completeness –

- All data required to be reported is reported
- Complete submission – all required components included

Structure and Rules

Instance Document

Before the instance document is submitted – XBRL provides for the Validation of Data in four aspects!

Accuracy –

- "Inter-instance" validation e.g., a+b=c a-c=b
- Group summations = the total of its parts
- May include variance waivers
- May also include flags for predetiermined variances from expected values

Structure and Rules

Instance Document

Before the instance document is submitted – XBRL provides for the Validation of Data in four aspects!

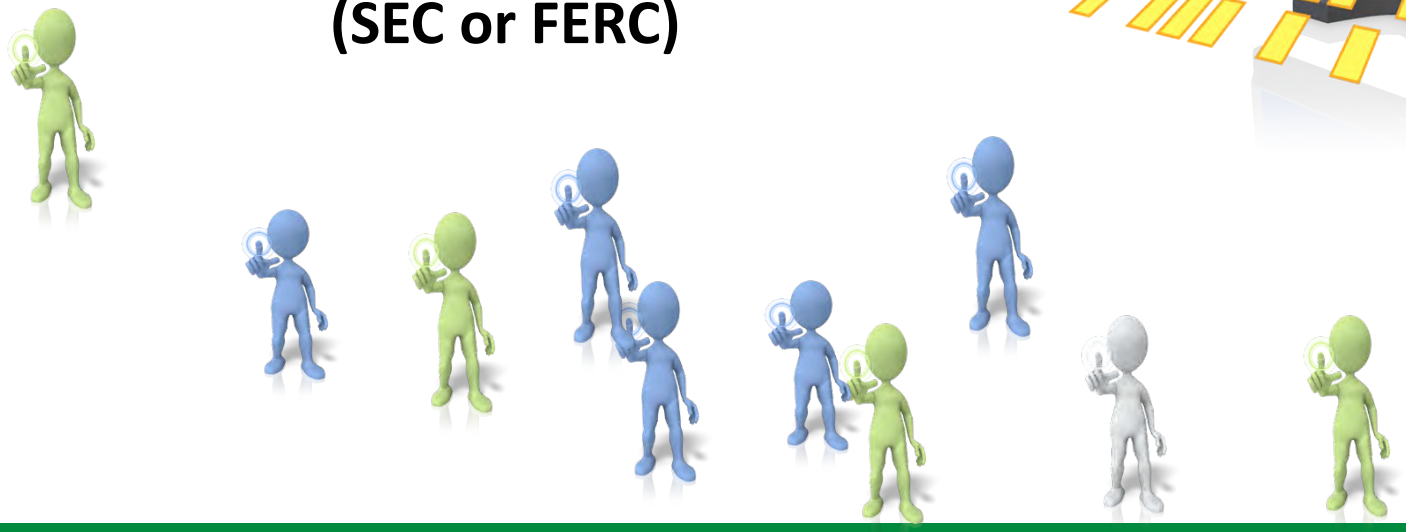
Consistency –

- "Inter and Intra instance" validation
- Assets = Liabilities + Equity
- Beginning balances = Ending balances LY
- Accounts with zero change may be flagged

Structure and Rules

Instance Document

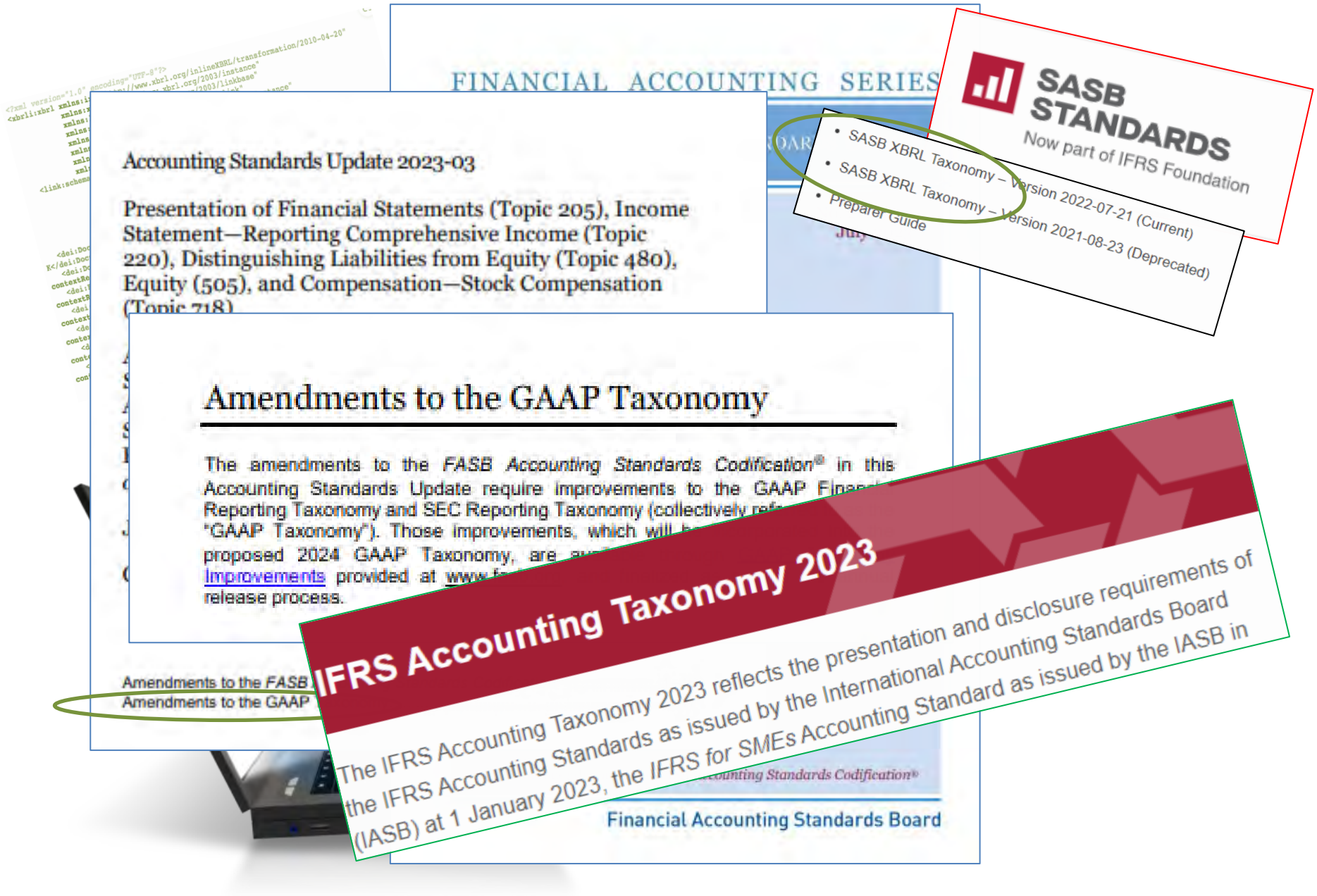
If Instance is Validated, the final document is uploaded to the regulator as a filed report (SEC or FERC)



Structure and Rules

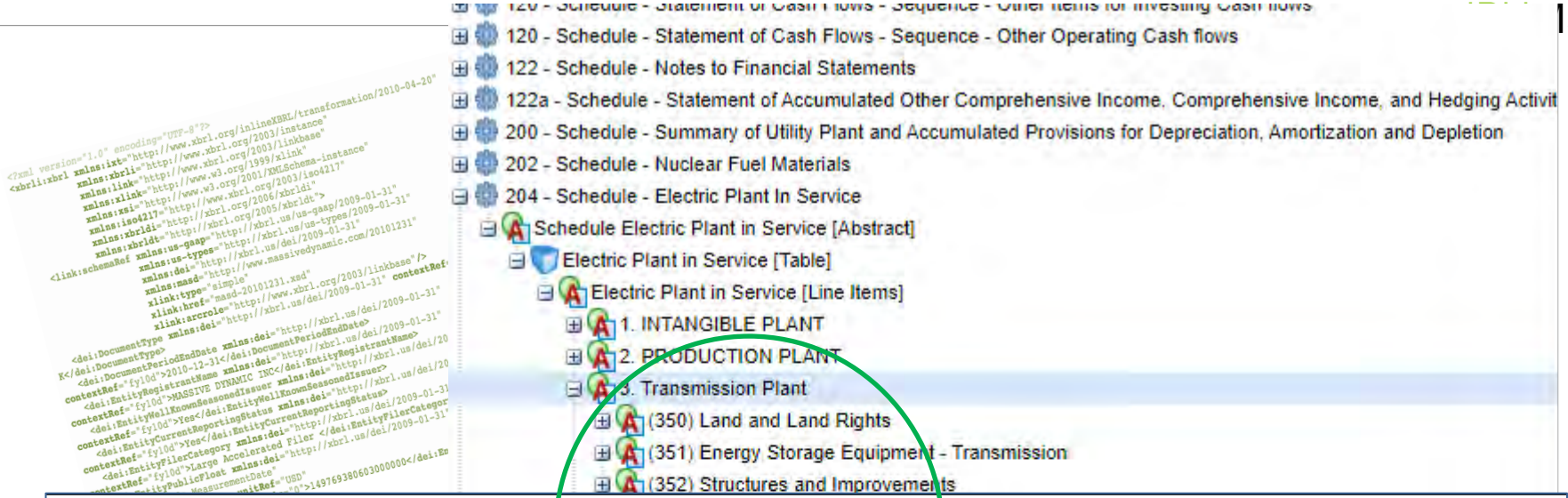
Essential XBRL Document Files

- Instance Document
- Taxonomy


FINANCIAL ACCOUNTING SERIES
Accounting Standards Update 2023-03
Presentation of Financial Statements (Topic 205), Income Statement—Reporting Comprehensive Income (Topic 220), Distinguishing Liabilities from Equity (Topic 480), Equity (505), and Compensation—Stock Compensation (Topic 718)
Amendments to the GAAP Taxonomy
The amendments to the FASB Accounting Standards Codification® in this Accounting Standards Update require improvements to the GAAP
Reporting Taxonomy and SEC Reporting Taxonomy (collectively
"GAAP Taxonomy"). Those improvements, which will
proposed 2024 GAAP Taxonomy, are
Improvements provided at
release process.
Amendments to the FASB
Amendments to the GAAP
SASB STANDARDS
Now part of IFRS Foundation
SASB XBRL Taxonomy – Version 2022-07-21 (Current)
SASB XBRL Taxonomy – Version 2021-08-23 (Deprecated)
Preparer Guide
IFRS Accounting Taxonomy 2023
The IFRS Accounting Taxonomy 2023 reflects the presentation and disclosure requirements of the IFRS Accounting Standards as issued by the International Accounting Standards Board (IASB) at 1 January 2023, the IFRS for SMEs Accounting Standard as issued by the IASB in
Financial Accounting Standards Board

Taxonomy for Antennaria monocepala

Figure 7. Synonym conflict in IPNI and NCBI. Name cluster containing "Antennaria solitaria" and "Antennaria monocephala" produced by TBMap [8]. Antennaria solitaria and Antennaria monocephala are synonyms in IPNI, but are treated as distinct taxa by NCBI. In such cases, PhyloFinder uses the NCBI classification.



ELECTRIC PLANT IN SERVICE (Account 101, 102, 103 and 106)

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 (c) 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 by primary plant account, increases in column (c) additions and reductions in column (e) adjustments.
5. Enclose in parentheses credit adjustments of plant accounts to indicate the negative effect of such accounts.
6. Classify Account 106 according to 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). 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 entry to the account for accumulated depreciation provision. Include also in column (d) distributions of these tentative classifications in columns (c) and (d), including the reversals of the prior years tentative account distributions of these amounts. Careful observance of the above instructions and the texts of Accounts 101 and 106 will avoid serious omissions of the reported amount of respondent's plant actually in service at end of year.
7. Show in column (f) reclassifications or transfers within utility plant accounts. Include also in column (f) the additions or reductions of primary account classifications arising from distribution of amounts initially recorded in Account 102, include in column (e) the amounts with respect to accumulated provision for depreciation, acquisition adjustments, etc., and show in column (f) only the offset to the debits or credits distributed in column (f) to primary account classifications.
8. For Account 399, state the nature and use of plant included in this account and if substantial in amount submit a supplementary statement showing subaccount classification of such plant conforming to the requirement of these pages.

47	3. Transmission Plant						
48	(350) Land and Land Rights						
48.1	(351) Energy Storage Equipment - Transmission						
49	(352) Structures and Improvements						
50	(353) Station Equipment						
51	(354) Towers and Fixtures						
52	(355) Poles and Fixtures						
53	(356) Overhead Conductors and Devices						
54	(357) Underground Conduit						
55	(358) Underground Conductors and Devices						
56	(359) Roads and Trails						
57	(359.1) Asset Retirement Costs for Transmission Plant						
58	TOTAL Transmission Plant (Enter Total of lines 48 thru 57)						

- 120 - Schedule - Statement of Cash Flows - Sequence - Other Operating Cash flows
- 122 - Schedule - Notes to Financial Statements
- 122a - Schedule - Statement of Accumulated Other Comprehensive Income, Comprehensive Income, and Hedging Activit
- 200 - Schedule - Summary of Utility Plant and Accumulated Provisions for Depreciation, Amortization and Depletion
- 202 - Schedule - Nuclear Fuel Materials
- 204 - Schedule - Electric Plant In Service
  - Schedule Electric Plant in Service [Abstract]
    - Electric Plant in Service [Table]
      - Electric Plant in Service [Line Items]
        - 1. INTANGIBLE PLANT
        - 2. PRODUCTION PLANT
        - 3. Transmission Plant
          - (350) Land and Land Rights
          - (351) Energy Storage Equipment - Transmission
            - Energy Storage Equipment - Transmission, Balance at Beginning of Year
            - Energy Storage Equipment - Transmission, Additions
            - Energy Storage Equipment - Transmission, Retirements
            - Energy Storage Equipment - Transmission, Adjustments
            - Energy Storage Equipment - Transmission, Transfers
            - Energy Storage Equipment - Transmission, Balance at End of Year
          - (352) Structures and Improvements
          - (359) Roads and Trails
          - (359.1) Asset Retirement Costs for Transmission Plant
          - TOTAL Transmission Plant (Enter Total of lines 48 thru 57)
        - 4. Distribution Plant
        - 5. REGIONAL TRANSMISSION AND MARKET OPERATION PLANT
        - 6. General Plant
        - TOTAL (Accounts 101 and 106)
        - (102) Electric Plant Purchased (See Instr. 8)
        - (Less) (102) Electric Plant Sold (See Instr. 8)
        - (103) Experimental Plant Unclassified
        - TOTAL Electric Plant in Service (Enter Total of lines 100 thru 103)
- 213 - Schedule - Electric Plant Leased To Others
- 213 - Schedule - Electric Plant Leased To Others - Totals
- 214 - Schedule - Electric Plant Held for Future Use
- 214 - Schedule - Electric Plant Held for Future Use - Totals

120 - Schedule - Statement of Cash Flows - Sequence - Other Operating Cash flows

47	3. Transmission Plant			
48	(350) Land and Land Rights			
48.1	(351) Energy Storage Equipment - Transmission			
49	(352) Structures and Improvements			
50	(353) Station Equipment			
51	(354) Towers and Fixtures			
52	(355) Poles and Fixtures			
53	(356) Overhead Conductors and Devices			
54	(357) Underground Conduit			
55	(358) Underground Conductors and Devices			
56	(359) Roads and Trails			
57	(359.1) Asset Retirement Costs for Transmission Plant			
58	TOTAL Transmission Plant (Enter Total of lines 48 thru 57)			

come, and Hedging Activit

ation and Depletion

Nillable true

Labels

Type	Lang	Label
Standard Label	en	Energy Storage Equipment Transmission Plant [Abstract]
F1-All Roll Forward Header labels	en	(351) Energy Storage Equipment - Transmission

References

Type	Reference	
Form Location	Form	Form 1
	Schedule	204 - Schedule - Electric Plant In Service
	Column	a
	Row	48.1
	ValueType	Label
	ColumnName	F1RollforwardHeader

Custom Type Information

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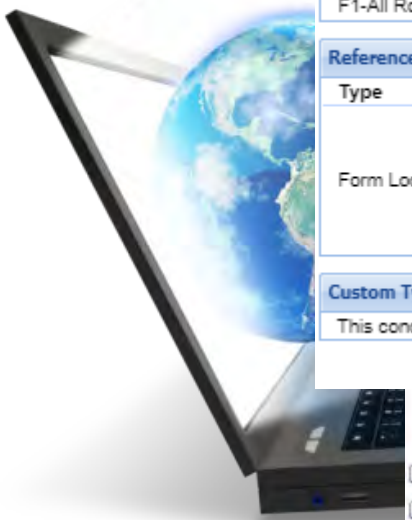

(103) Experimental Plant Unclassified

TOTAL Electric Plant in Service (Enter Total of lines 100 thru 103)

213 - Schedule - Electric Plant Leased To Others

213 - Schedule - Electric Plant Leased To Others - Totals

214 - Schedule - Electric Plant Held for Future Use

214 - Schedule - Electric Plant Held for Future Use - Totals

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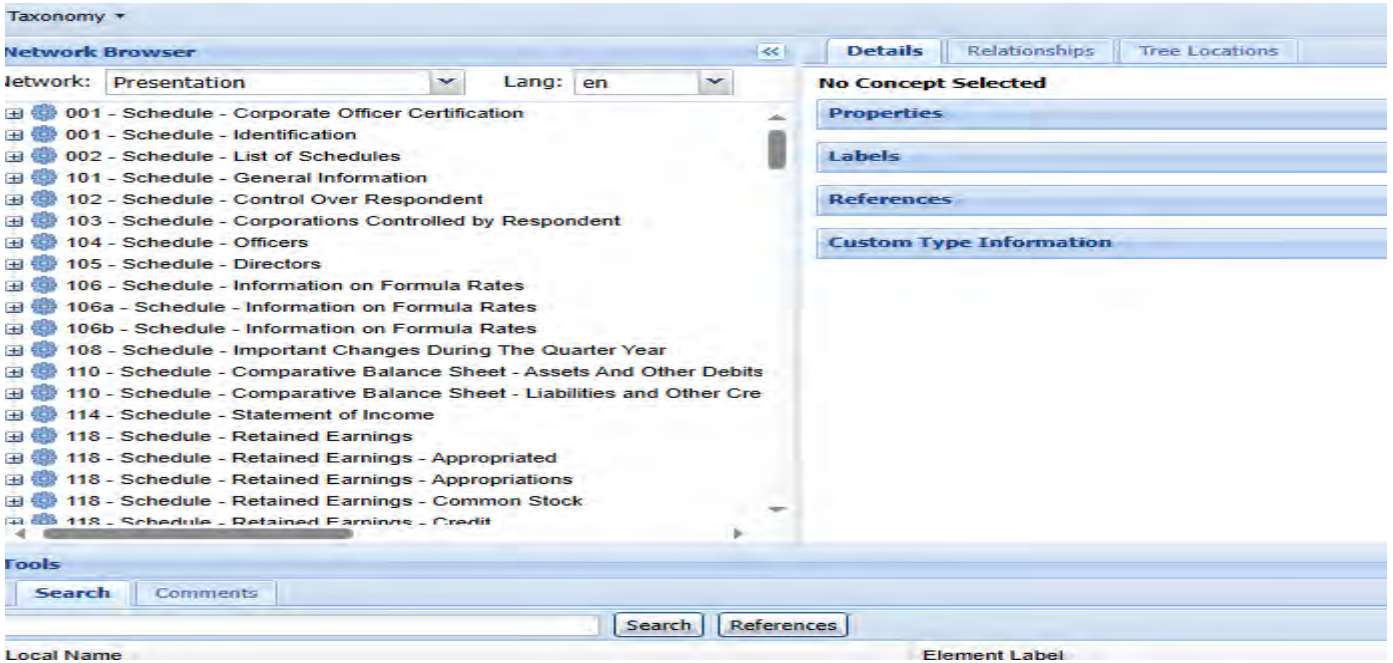

CALIFORNIA WATER SERVICE GROUP
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
Unaudited (In thousands, except per share data)

For the three months ended	June 30, 2020	June 30, 2019
Operating revenue	$ 175,484	$ 179,031
Operating expenses:		
Operations:		
Water production costs	71,142	64,635
Administrative and general	26,939	25,434
Other operations	25,898	22,542
Maintenance	6,722	5,692
Depreciation and amortization	24,542	22,326
Income taxes	622	4,321
Property and other taxes	7,126	7,068
Total operating expenses	162,991	152,018
Net operating income	12,493	27,013
Other income and expenses:		
Non-regulated revenue	4,208	5,130
Non-regulated expenses	(492)	(3,900)
Other components of net periodic benefit cost	(1,332)	(1,192)
Allowance for equity funds used during construction	1,705	1,686
Income tax expense on other income and expenses	(820)	(48
Net other income	3,269	1,237

Menu | Sections | Search Facts | Data | Tags | More Filters | Facts 1,737

CALIFORNIA WATER SERVICE GROUP
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
Unaudited (In thousands, except per share data)

Calculation

Utilities Operating Expense, Products and Services

Balance Debit

Section 1003004 - Statement - CONDENSED CONSOLIDATED STATEMENTS OF (LOSS) INCOME

For the three months ended	June 30, 2020	June 30, 2019
Operating revenue	$ 175,484	$ 179,031
Operating expenses:		
Operations:		
Water production costs	71,142	64,635
Administrative and general	26,939	25,434
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Net other income	3,269	1,237

A Quick Recap

- We know what XBRL is,
- We know basically who uses it
- We *kind of* know how it operates, … *kind of*…
- BUT the big question is:

How do we get to all that data?

Tools for accessing FERC XBRL Data

FERC Website

Although FERC has only converted to XBRL based reporting within the last couple of years, it already has an impressive collection of recent and historical annual reports in XBRL.*

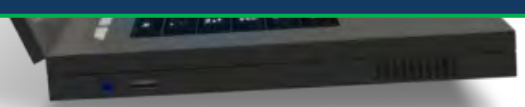
https://ecollection.ferc.gov/

* FERC has also converted over twenty-years of old fox-pro based annual reports into the new XBRL taxonomy!

Submission History

Clear All | Company | Form

CID	Company	Form	Year	Period	Date/Time	Status	Filing ID
C000379	Avista Corpo...	Form 1	2022	Q4	4/18/2023, 5...	Accepted	110188
C000379	Avista Corpo...	Form 1	2021	Q4	4/15/2022, 4...	Accepted	79668
C000379	Avista Corpo...	Form 1	2020	Q4	4/15/2021, 1...	Migrated	47371
C000379	Avista Corpo...	Form 1	2019	Q4	4/15/2020, 3...	Migrated	46537
C000379	Avista Corpo...	Form 1	2018	Q4	4/15/2019, 4...	Migrated	45740
C000379	Avista Corpo...	Form 1	2017	Q4	4/11/2018, 2...	Migrated	44894
C000379	Avista Corpo...	Form 1	2016	Q4	3/31/2017, 1...	Migrated	44028
C000379	Avista Corpo...	Form 1	2015	Q4	4/15/2016, 2...	Migrated	43350
C000379	Avista Corpo...	Form 1	2014	Q4	4/15/2015, 4...	Migrated	42581
C000379	Avista Corpo...	Form 1	2013	Q4	4/11/2014, 1...	Migrated	41689



eLibrary

Federal Energy Regulatory Commission

ACCESSIBILITY TIPS FERC.GOV HELP

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Note: Icons and links to zip, view or download files will be disabled if you do not have the required permission to perform these actions. Privileged, Protected and CEII files are available to FERC personnel after login. Contact the helpdesk to request access to offline files such as microfilm and microfiche documentation at 202-502-6652 or toll free at 1-866-208-3676 (M-F 8:30 AM - 5:00 PM EST, except holidays)

Filing Description for Accession Number 20230418-8113

Avista Corporation submits FERC Form 1 report for 2022/Q4

Generate PDF | Zip and Download All Files | Document Info

File List

Rows Per Page : 100 | 1 - 1 of 1 | Large Format * > 10 MB | Zipped 0 MB 0 Files

Filename	Description	File Type	File Size * > 10 MB	Security Level
+ XBRL_1_60_20230417151057_110188.html *	Avista Corporation submits FERC Form 1 report for 2022/Q4	HTML	11832 KB	Public

version: 5.5.5.0
Release: 07/07/2023

For any issues regarding FERC Online, please contact ferconlinesupport@ferc.gov or call 866-208-3676.
Please include a current mail address, telephone number, and email address.

FERC Website

Advantages:

Quick, Nice rendering of FERC forms, Search function with HTML or PDF.

Able to download XBRL files.

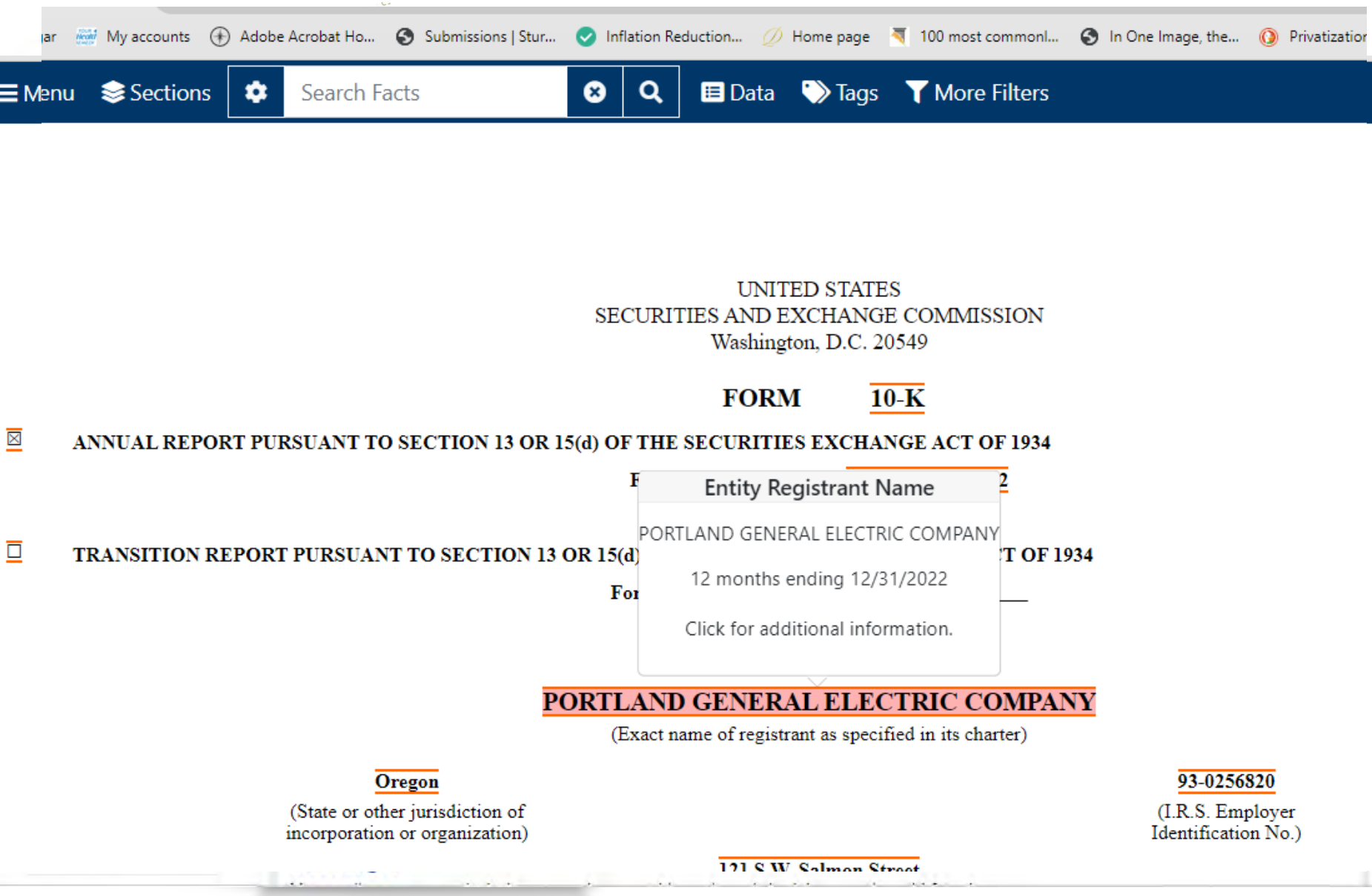
Disadvantages:

This platform still does not allow specific data to be extracted to a spreadsheet or template.

SEC Website

The SEC provides an “inline XBRL viewer” for reports filed with it. By placing the company name in the search, 10k information can be retrieved along with other SEC filings!

https://www.sec.gov/edgar/searchedgar/companysearch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FORM 10-K
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)
Entity Registrant Name
PORTLAND GENERAL ELECTRIC COMPANY
12 months ending 12/31/2022
Click for additional information.
PORTLAND GENERAL ELECTRIC COMPANY
(Exact name of registrant as specified in its charter)
Oregon
(State or other jurisdiction of incorporation or organization)
93-0256820
(I.R.S. Employer Identification No.)

SEC Website

Advantages:

Quick, Nice rendering of SEC forms, Search function with HTML or PDF.

Able to download XBRL files.

Disadvantages:

This platform also does not allow specific data to be extracted to a spreadsheet or template.

The tagged information is not complete or consistent between companies

API
Application Programming Interface

Accessing XBRL formatted data can be a challenge without the right tools.

The most common request is to upload FERC annual report data to Excel or Google Sheet.

To populate data into your spreadsheet an add-in (an API) is required.

API stands for Application Programming Interface. APIs provide a path for two computer programs to communicate.

XBRL-US Website

XBRL US is working hard to support the creation of APIs that allow access to XBRL files from FERC to the SEC. We will look at two that were designed for FERC XBRL Annual reports.

https://xbrl.us/home/use/xbrl-api-community/

XBRL Data Community

This community helps developers, analysts, and business intelligence professionals connect with and use the XBRL API, Public Filings Database, staff and community-sourced resources and tools more effectively.

Get a Taste.

Login and take a look at **the 10 most-recently filed reports and base taxonomy information** or **the last 12 times the concepts Assets and Liabilities appeared** in reports **from *any XBRL sources* we monitor** – currently SEC, FERC, and ESEF (new visitors might need to login twice). The browser view of these XBRL API queries is JSON format, so it might look messy – don't worry, we've got some free tools, templates and code samples below that can help get more data in ways that may be a bit easier to read.

Get Started.

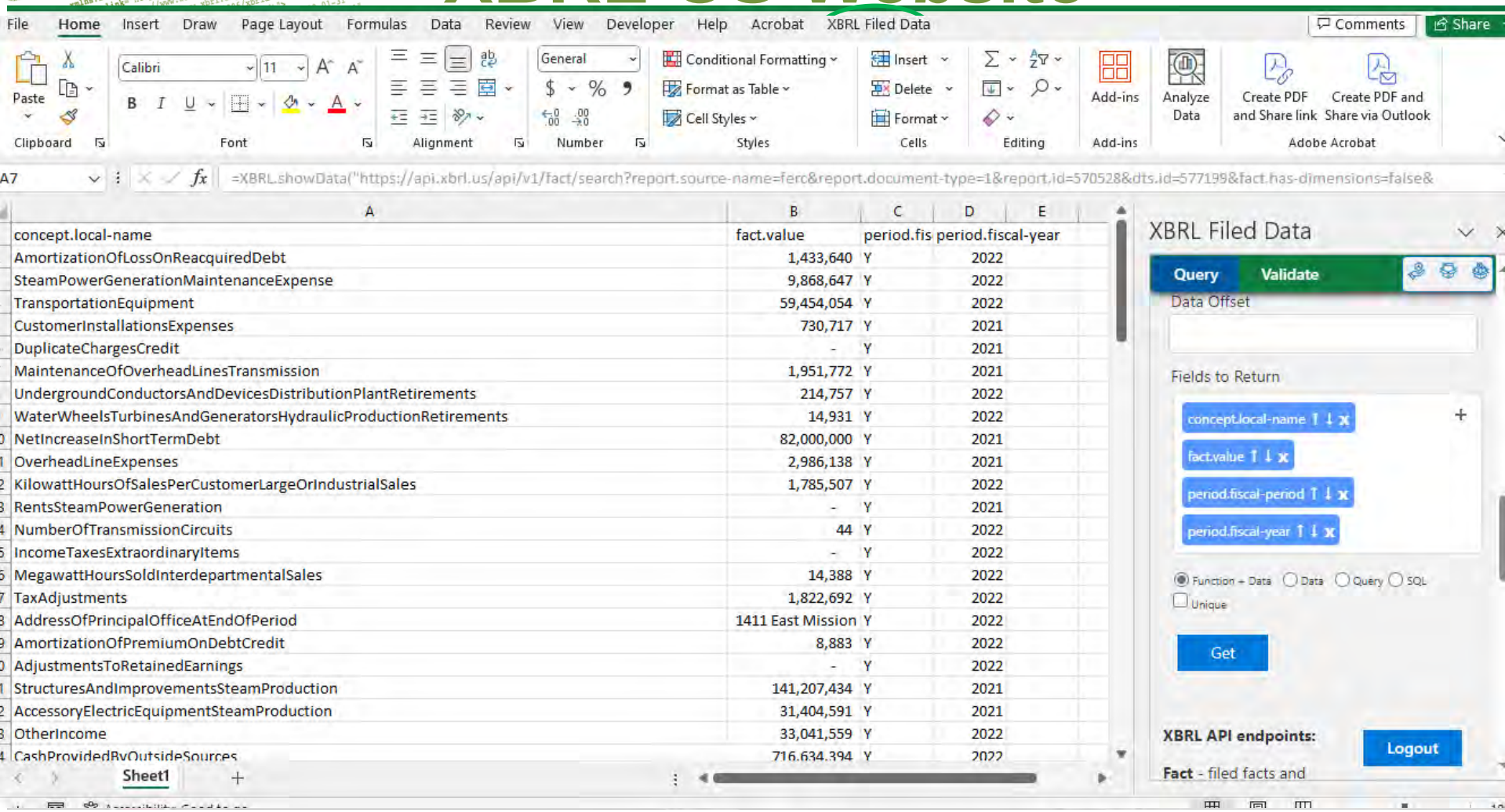
Using the ***XBRL Filed Data*** extension for Google Sheets or Office 365 Excel is an easy way to get started creating queries and understanding how to use the XBRL API and our Public Filings Database. Scroll down for free spreadsheet templates you can customize, as well as other resources for using the XBRL API with programming languages like PHP, Python and R.

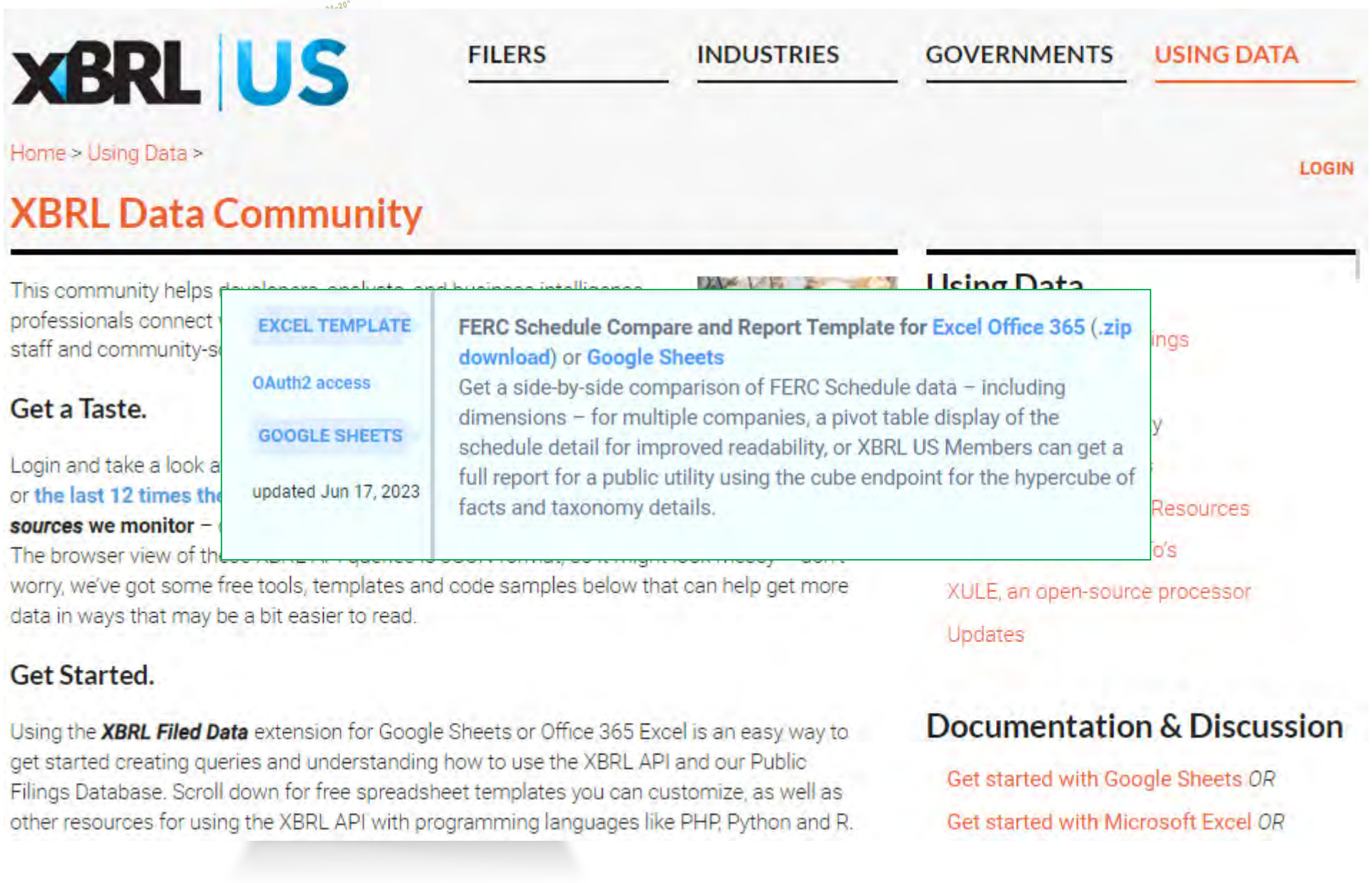
Google Sheets Add-on | Excel Add-in (O365) | OAuth2 access

Anyone can explore our Database with the XBRL API without cost or obligation. Most XBRL US Members enjoy unlimited access and no quotas. Consider XBRL US Membership options for yourself or your team.

Need help?
– Watch introductory videos for Google Sheets Add-on or Excel.

XBRL-US Website

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EXCEL TEMPLATE
OAuth2 access
GOOGLE SHEETS
updated Jun 17, 2023
FERC Schedule Compare and Report Template for Excel Office 365 (.zip download) or Google Sheets
Get a side-by-side comparison of FERC Schedule data – including dimensions – for multiple companies, a pivot table display of the schedule detail for improved readability, or XBRL US Members can get a full report for a public utility using the cube endpoint for the hypercube of facts and taxonomy details.
Using Data
ings
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Resources
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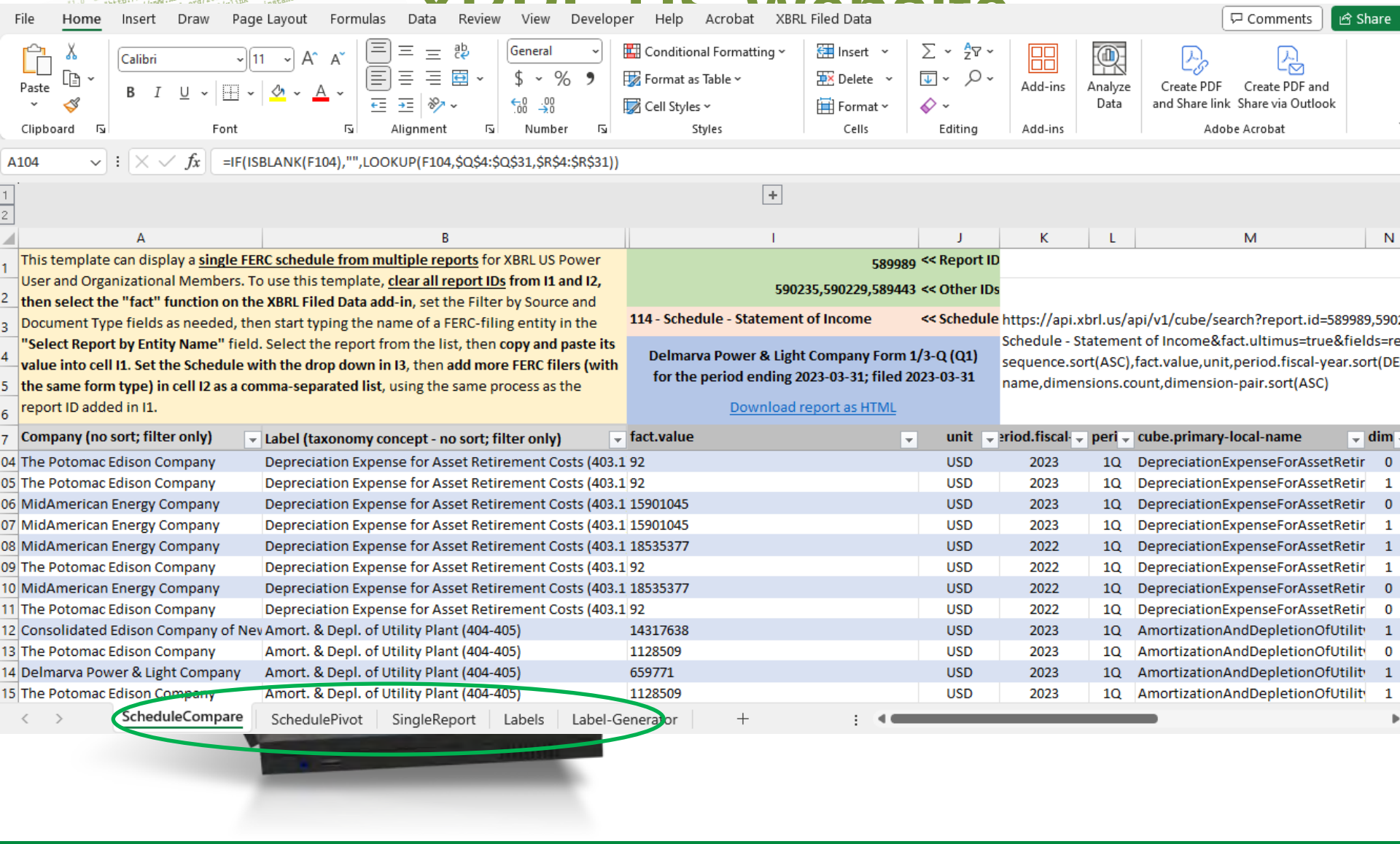
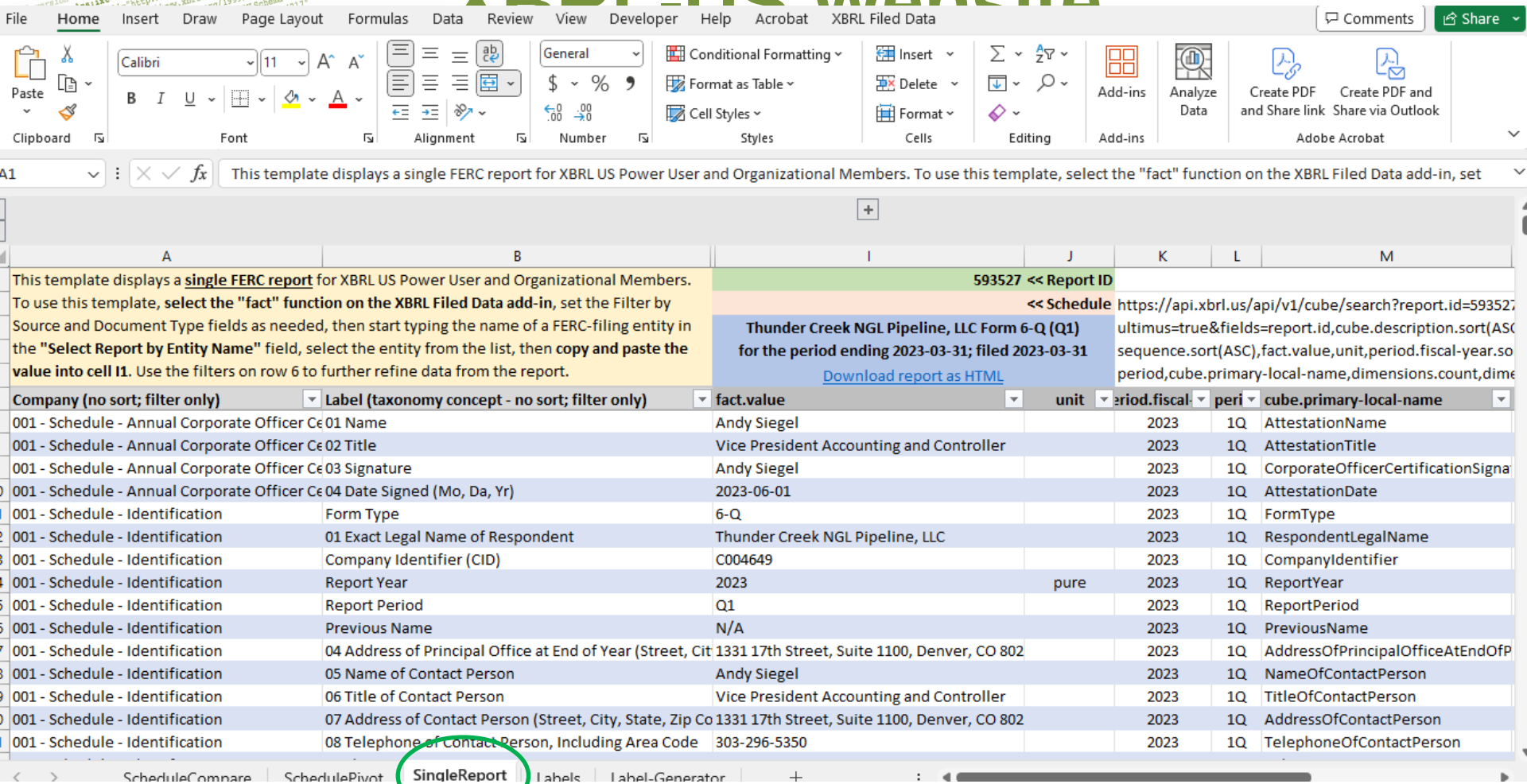
XULE, an open-source processor
Updates
Documentation & Discussion
Get started with Google Sheets OR
Get started with Microsoft Excel OR

XBRL US Website



XBRL US Website



Avista Corporation

Financial Benchmarks

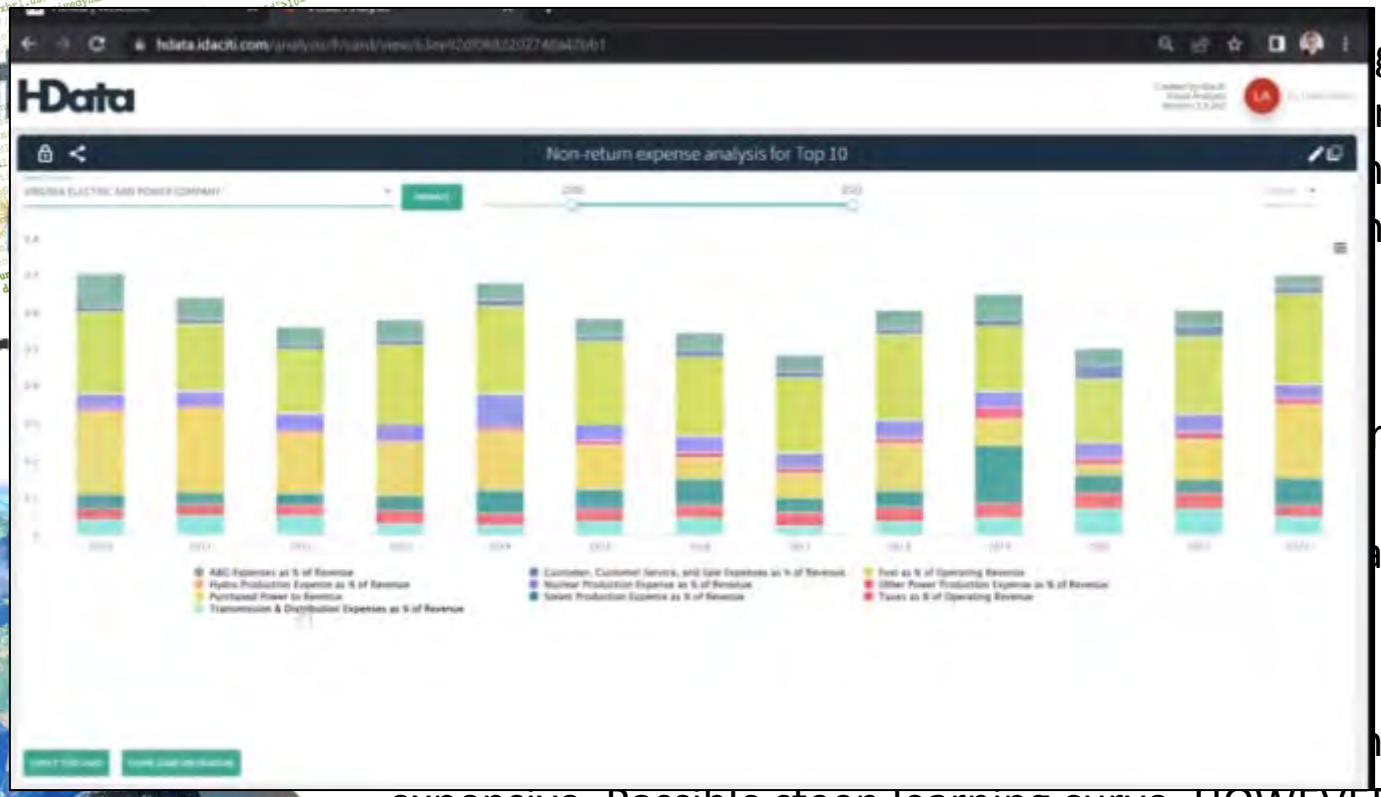
	Δ Revenue	Δ Utility Op Expense	Op Ratio	Working Capital	Net Plant Growth Rate	Asset Turnover Ratio
Last 5 yrs	-1.8%	-3.6%	89.26	-69,721	6.2%	56.64
Last Yr.	-0.1%	-0.2%	88.28	-53,077	7.4%	49.74
Trend						

	(a) Revenue	(b) Utility Op Expense	(c) Op Ratio	(d) Current Assets	(e) Current Liabilities	(f) Working Capital
2017	1,602,043,842	1,439,975,392	89.884	293,497,874	362,989,647	(69,492)
2018	1,617,162,384	1,456,974,449	90.095	270,636,633	333,434,461	(62,798)
2019	1,494,227,540	1,340,800,457	89.732	234,673,968	299,188,386	(64,514)
2020	1,574,987,368	1,391,029,230	88.320	286,236,661	384,958,898	(98,722)
2021	1,572,976,141	1,388,579,712	88.277	268,614,596	321,691,142	(53,077)
2022						
Ref	114-2	114-25	(b)/(a)	111-67	113-54	((d)-(e))/1,000
Δ Last 5 yrs	-2%	-4%	89.261			(69,721)

	(g) Total Utility Plant	(h) Acc Depr.	(i) Net Plant	(j) NP Growth Rate	(k) Asset Turnover Ratio
2017	3,768,607,461	1,284,830,029	2,483,777,432		0.65
2018	3,955,107,069	1,333,212,160	2,621,894,909	5.56%	0.62
2019	4,183,698,822	1,408,153,972	2,775,544,850	5.86%	0.54
2020	4,437,264,301	1,491,212,830	2,946,051,471	6.14%	0.53
2021	4,736,479,217	1,573,767,832	3,162,711,385	7.35%	0.50
2022					
Ref	110-4	110-5	(g)-(h)		(a)/(i)
Δ Last 5 yrs			27%	6.23%	0.57

understand

XBRL- 3rd party vendors



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expensive. Possible steep learning curve. HOWEVER, long term cost savings can maximize the benefits of XBRL data.

The Future of XBRL in Public Utility Regulation

Within Five Years I'm Predicting:

- ❑ The FERC XBRL taxonomy will be extended to allow companies to file individual state annual reports.
- ❑ A single water-company taxonomy will be developed to support not only economic oversight but also SRF loans and grants, water withdraws, and health department requirements
- ❑ Audit tools will be developed by regulators that maximize the power of XBRL.

“XBRL gives regulators the opportunity to change the current reactive regulatory paradigm into one of truly proactive regulatory oversight.”

A Little Background

However, these same agencies will spend little time exploring new emerging regulatory techniques or oversight tools. Instead regulators routinely accept a regulated entity's proposed 'best practices' while spending little or no time developing their own. This regulatory 'tunnel vision' results in agencies overlooking exciting new tools such as eXtensible Business Reporting Language (XBRL), that if implemented correctly, could provide significant increases in staff productivity, resulting in more streamlined, transparent and successful regulation. Anyone that has seen XBRL feeding into a predesigned spreadsheet, precisely and accurately, magically populating its cells with relevant tagged data, knows that XBRL is the future, and, to use an overworked cliché, the

June 2013

NARUC Honors Excellence in Regulatory Innovation at Annual Meeting

View as PDF

For Immediate Release: November 16, 2017
Contact: Regina Davis, 202-898-9382, rdavis@naruc.org

NARUC Honors Excellence in Regulatory Innovation at Annual Meeting

WASHINGTON—Regulatory and industry innovators were honored at the Annual Meeting and Education Conference of the National Association of Regulatory Utility Commissioners, held November 12-15 in Baltimore, Md. The recognition program, "*Innovation Awards: Promoting Innovation among Utility Regulatory Policy and Utilities*," promotes and recognizes the work of NARUC members and utility innovators for innovative solutions to regulatory issues.

The awards program was facilitated by NARUC's Task Force on Innovation, chaired by Illinois Commerce Commission Chair Brien Sheahan. The task force was established to assist the Association track, adapt and be resilient to new trends and opportunities to bring diverse technologies to utility regulation.

"The regulatory landscape is continuously evolving and as such, regulators need to understand how the industries we regulate are using these technologies and the customer impacts," said NARUC President John Betkoski III of Connecticut. "The task force has been instrumental in bringing the thought-leaders in technology and regulatory innovation to NARUC and serves as a gateway for members to embrace innovation."

"These deserving recipients represent the types of cutting-edge technologies that benefit regulators, industry and consumers," said Sheahan. "The task force received many entries and we appreciate the efforts of all the nominators and nominees. We also appreciate the support and guidance from NARUC leadership and staff."

Danny Kermode
Individual Innovator in Regulatory Policy

Danny Kermode, a CPA and regulatory accountant with more than 30 years of experience, recognized the growing gap between technology and regulatory oversight. He is now leading the Washington Utilities and Transportation Commission's initiative to analyze companies' data instantly, using commission designed dashboards and templates. Mr., Kermode has taken an internationally recognized business reporting standard called XBRL (short for eXtensible Business Reporting Language) and adapted it to recognized the UTC's regulatory accounting and operating reporting requirements. The project developed a data-collection standard for all the of the UTC's regulated companies, including water and transportation.

PUBLIC UTILITIES FORTNIGHTLY

The Sustainable Resilient Affordable Debates

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Fortnightly Top Innovators 2019

Danny Kermode, Washington Utilities and Transportation Commission

Recognizing the growing gap between technology and the tools used for regulatory oversight, he became a leading advocate for the national initiative to move to structured data for collection and analysis of regulated utilities information. Structured data is a new tool that allows regulatory analysts to begin their work right away instead of spending considerable time inputting and correcting data. This has been adopted by FERC as a national standard for utility reporting in Order No. 859. **See the article by Kermode in October 2019's PUF**.

Questions / Comments?

Everyone!!
Thank you for your attention!