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REGULATORY ACCOUNTING: A PRIMER FOR UTILITY REGULATORS



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REGULATORY ACCOUNTING: A PRIMER FOR UTILITY REGULATORS

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About NARUC

NARUC is a non-profit, quasi-governmental organization whose members include the governmental agencies that regulate essential public services, such as electricity and gas, in the 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation in the U.S. and around the world. NARUC provides a venue to set and influence public policy, share best practices, and foster innovative solutions to improve regulation.

For more than 20 years, NARUC has advised nascent regulators worldwide to drive meaningful change in their energy sectors. NARUC's international assistance is built upon its vast global network of present and former energy regulators, providing unmatched technical expertise, insight, and analysis into the full range of challenging regulatory issues. Drawing on the U.S., the developed world, and emerging economies, this network provides NARUC with the capacity to present a diverse set of options and expertise to regulators around the world.

About the Author

Thomas Welch served as Chairman of the Maine Public Utilities Commission for more than 15 years, and has worked, through NARUC and USAID, with utility regulators in Europe, Africa and the Caribbean for more than 25 years. He holds an AB from Stanford University and a JD from Harvard Law School.

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List of Acronyms

| | |
|-------|--|
| COA | Charts of Accounts |
| FERC | Federal Energy Regulatory Commission |
| GAAP | Generally Accepted Accounting Principles |
| IFRS | International Financial Reporting Standards |
| NARUC | National Association of Regulatory Utility Commissioners |
| O&M | Operation and Maintenance |
| USAID | United States Agency for International Development |
| USoA | Uniform System of Accounts |

1. Introduction

Effective regulation of utilities is all about getting the numbers right. All the crucial utility functions – providing reliable service safely and at economically efficient rates – depend upon the ability of the utility to obtain revenues, through regulated rates, that are sufficient – but not excessive – to build, operate and maintain the utility’s services. The regulator’s role is to ensure that the utility’s rates satisfy this need while protecting the utility’s customers from waste, inefficiency, and corrupt behavior.

The utility regulator cannot perform this essential role without accurate, timely, verifiable, granular, and comprehensive accounting data from the utility. Data of this quality are best collected using a well understood, and time-tested, accounting system. For regulators, the Uniform System of Accounts (USoA), used by all United States electric utilities and adopted by many utilities in other parts of the world, provides an ideal platform.

This primer is a guide to the structure and function of a system of accounts by which the regulated utility can record and categorize its myriad financial transactions and, as important, present accurate and coherent data concerning those transactions to the regulator charged with ensuring that the utility performs its essential functions at a reasonable cost to customers.

The primer first describes the characteristics and value of a sound accounting system; presents in broad outline and detailed examples the USoA, a system that has proven invaluable in utility regulation for many years in scores of jurisdictions; and finally offers suggestions for how to implement a sound utility system where, as may be the case, the existing system is incomplete, inaccurate, or otherwise inadequate to serve the regulator’s needs.

2. Characteristics and Value of Sound Utility Systems of Accounts

There are several types of accounting systems, each with its own purpose. Generally Accepted Accounting Principles (GAAP) comprise a set of rules relating to the treatment of revenues, expenses and assets. International Financial Reporting Standards (IFRS) address how information should be reported publicly to investors, in order to protect investors and the financial markets and allow a fair comparison among investment choices. Income Tax Accounting incorporates the relevant jurisdiction’s tax rules to ensure proper collection of revenues for government operation. Finally, Regulatory Accounting, of which the USoA is one type, is designed to identify and categorize the costs of providing service and provide a basis upon which to calculate the level of revenue needed to cover all the utility’s costs including a return on investment.

These various systems are not mutually exclusive. Indeed, virtually all utilities maintain sets of books under at least three systems: IFRS, Tax Accounting, and Regulatory Accounting, with guidance for entries in each often guided by GAAP.¹ For a regulated utility, however, the Regulatory Accounting system is the core from which the information entered into all other systems can be drawn. All of the basic information (drawn from invoices and receipts and other source documents) is recorded and categorized in the Regulatory Accounting system; from there it can be summarized, and adjusted if

¹ The USoA is generally consistent with GAAP; for a review of the differences, and efforts to increase that consistency, see the following for a discussion of the adoption of the USoA: “Overview of Accounting Systems,” NARUC, <https://pubs.naruc.org/pub.cfm?id=538E66C7-2354-D714-51E9-23D0C31CD7BB>. See also *Public Utility Accounting: A Public Power System’s Introduction to the Federal Energy Regulatory Commission Uniform System of Accounts* (Arlington: American Public Power Association, 2012), <https://www.publicpower.org/system/files/documents/Public%20Utility%20Accounting%20Manual%202018.pdf>.

necessary (for example for differences in depreciation treatment), for entries into reports for the tax authorities or investors.²

Effective price regulation is designed to answer two questions: How much revenue should the utility collect from customers, and how should that revenue “requirement” be allocated among customer groups. Neither of those questions can be answered accurately, however, unless both the utility – which has the task of proposing a level of revenues and a rate design to recover those revenues – and the regulator – which has the responsibility to ensure that the utility recovers just enough to cover its costs and earn a reasonable profit – have a shared, accurate and detailed record and understanding of the utility’s finances. The granular details available in a good system of accounts are particularly valuable when determining what costs are associated with which customers; aligning costs with rates enhances fairness (both actual and perceived) as well as economic efficiency.

The use of a coherent system of accounts will further provide the regulator with an important tool when it evaluates the performance of the utility in at least two important respects. First, is the utility investing at appropriate levels relative to maintenance and repair? Utilities have an incentive to overinvest in capital and underspend (relatively) for maintenance, because they earn a return on capital investment but not on expenses. Accurate charts of accounts, and clear instructions for those accounts, can help ensure that capital and expense spending are properly characterized.

Second, how does the utility’s investment, expense and revenue collection performance compare with that of similar utilities? Where several utilities in the same jurisdiction or region use the same accounting system, comparison between and among them allows the regulator to identify, and seek information concerning, “outliers” in the data, and thus help ensure that, to the extent possible, the utility is acting efficiently.

Further, a good accounting system will help both the utility and the regulator to identify areas of excess or inadequate investment by, for example, tracking investment levels against service performance. Such a system will also assist in identifying areas of “informal” economic activity by increasing the transparency of revenues and expenditures and by providing a platform for comprehensive financial audits.

Why does sound accounting matter? The perspective of the utility.

From: Public Utility Accounting a Public Power System's Introduction to the Federal Energy Regulatory Commission Uniform System of Accounts, Copyright © 2012 by the American Public Power Association

Many times, even those utilities that utilize the FERC Uniform System of Accounts often question why proper, consistent coding even matters. As an introduction to the importance of the FERC Uniform System of Accounts, let’s consider the impact of a significant cost misclassified as an operation and maintenance (O&M) cost when in reality it was a cost that should have been capitalized. Why does this matter? Because the error has shifted costs from what should have been an addition to our balance sheet over to an immediate full impact on the income statement. If properly capitalized the impact on the income statement would only be by a certain amount each year, through depreciation (depending upon useful life).

As noted above, if this cost were erroneously charged to an O&M account, the costs would impact the utility’s income statement immediately, thereby reducing net income. Asset values would also be understated. Although this is an issue that all utilities should be concerned with, it is particularly important to investor-owned utilities who normally earn an allowed rate of return based upon their investment in assets serving customers. So, this error has not only reduced the utility’s net income, a figure certainly a factor in obtaining debt, meeting debt coverage ratios, as well as having a significant impact on stock price (for an investor-owned utility), but asset values have been understated as well, thereby reducing return on investment.

The value of a comprehensive and detailed regulatory accounting system increases over time, as the utility and regulator are able to compare revenues and spending over several years to identify trends or anomalies, and as the use of similar systems spreads geographically in the region, allowing benchmarking, trending, and the identification of best practices.

Benchmarking – comparing data from the same account or accounts among several utilities – can assist the regulator by allowing for comparison of similar data, information, statistics, among companies: it allows an assessment of how well a utility is doing compared to other similarly situated utilities, and assists in focusing questions on areas where the data show unexplained variations.

Trending measures changes in a utility's performance, investment, revenues and costs over time, and thus can help identify areas of inadequate or excessive funding, as well as the success of efforts (for example) to increase collections.

Finally, a sound accounting system will assist in the utility's and regulator's efforts to assign and allocate costs to appropriate customer groups, and develop rate structures that recover fixed costs from fixed charges, and variable costs from variable charges.

Regional consistency will enhance the benefits of a coherent and comprehensive system. Using the same system throughout a region allows utility and regulator to compare, for example, operating costs of similarly situated facilities owned by utility, operating costs of facilities owned by others providing services to the utility, and operating costs throughout the region from one period to the next.

To summarize: In order to accomplish these various beneficial results, an accounting system should be verifiable, sufficiently granular, and (to the extent possible) consistent across time, relevant industries and geographies. It must be able to track spending and income from source documents to categories, and must be comprehensive in order to capture all regulated activities, and also permit separation of non-utility financial activities where those are permitted. As described in detail below, the USoA satisfies all these conditions.

3. The USoA

The USoA³ is used by virtually every electric utility in the United States and is gaining widespread support throughout the world.⁴ As the excerpts and discussion below indicate, it provides a comprehensive set of instructions and charts of accounts that can, taken together, provide the vital detailed information needed by the utility and regulator.

This section of the primer will provide short examples from each major section of the USoA, together with some commentary and an illustration from a recent report using data from USoA charts of accounts. The italicized material in red below is text from the USoA.

³ The full version of the USoA can be found at *Subchapter C – Accounts, Federal Power Act*, <https://www.govinfo.gov/content/pkg/CFR-2011-title18-vol1/pdf/CFR-2011-title18-vol1-part101.pdf>, and also at “18 CFR Part 101 – Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act,” Legal Information Institute, <https://www.law.cornell.edu/cfr/text/18/part-101>.

⁴ See, e.g., the efforts noted in Section 4.

3.1. Definitions

When used in this system of accounts:

- 1. Accounts means the accounts prescribed in this system of accounts.*
- 2. Actually issued, as applied to securities issued or assumed by the utility, means those which have been sold to bona fide purchasers for a valuable consideration, those issued as dividends on stock, and those which have been issued in accordance with contractual requirements direct to trustees of sinking funds.*

This section provides definitions of all terms used in the USoA. In some case, as in the case of “actually issued,” the definition provides substantive guidance: the use of that term in the USoA is limited to an issuance for value.

3.2. General Instructions

22. Depreciation Accounting.

- A. Method. Utilities must use a method of depreciation that allocates in a systematic and rational manner the service value of depreciable property over the service life of the property.*
- B. Service lives. Estimated useful service lives of depreciable property must be supported by engineering, economic, or other depreciation studies.*
- C. Rate. Utilities must use percentage rates of depreciation that are based on a method of depreciation that allocates in a systematic and rational manner the service value of depreciable property to the service life of the property. Where composite depreciation rates are used, they should be based on the weighted average estimated useful service lives of the depreciable property comprising the composite group.*

Some of the instructions, such as the instruction for depreciation quoted above, reflect important substantive decisions concerning the regulatory treatment of assets and expense. In the case of depreciation, the instruction indicates a preference for “straight line” depreciation, and in that respect may differ from tax accounting, which often allows accelerated depreciation. As noted above, these methods are not inconsistent; they are simply different and used for different purposes. So long as the relevant data can be mapped from one system to the other, both the regulator and the tax assessor can have confidence in the data.

2. Records.

- A. Each utility shall keep its books of account, and all other books, records, and memoranda which support the entries in such books of account so as to be able to furnish readily full information as to any item included in any account. Each entry shall be supported by such detailed information as will permit ready identification, analysis, and verification of all facts relevant thereto.*
- B. The books and records referred to herein include not only accounting records in a limited technical sense, but all other records, such as minute books, stock books, reports, correspondence, memoranda, etc., which may be useful in developing the history of or facts regarding any transaction.*
- C. No utility shall destroy any such books or records unless the destruction thereof is permitted by rules and regulations of the Commission.*

Some instructions, such as the instruction concerning records, are essential to the ability of the regulator to ensure accuracy and transparency of the utility's records. The records described here, which must be retained according to rules established by the regulator, will allow complete tracking of all financial events.

3.3. Utility Plant Instructions

2. Electric Plant to Be Recorded at Cost.

A. All amounts included in the accounts for electric plant acquired as an operating unit or system, except as otherwise provided in the texts of the intangible plant accounts, shall be stated at the cost incurred by the person who first devoted the property to utility service.

This is another area where the instructions indicate a substantive regulatory choice: costs for plant are to be recorded at original cost, and not some other measure (such as fair value). This does not preclude the regulator from determining, in a particular case based on particular circumstances, that rate base can be determined using some other method; even where a different method is used, however, it is valuable to have a record, in the utility's charts of accounts, of the original cost basis for the assets. Having that information would, for example, allow calculation of asset value impairment in the event that a fair value rate base is used for ratemaking purposes.

3.4. Operating Expense Instructions

1. Supervision and Engineering (Major Utilities).

The supervision and engineering includible in the operating expense accounts shall consist of the pay and expenses of superintendents, engineers, clerks, other employees and consultants engaged in supervising and directing the operation and maintenance of each utility function. Wherever allocations are necessary in order to arrive at the amount to be included in any account, the method and basis of allocation shall be reflected by underlying records.

...

Expenses

2. Maintenance.

A. The cost of maintenance chargeable to the various operating expense and clearing accounts includes labor, materials, overheads and other expenses incurred in maintenance work. A list of work operations applicable generally to utility plant is included hereunder. Other work operations applicable to specific classes of plant are listed in functional maintenance expense accounts.

Items

1. Direct field supervision of maintenance.

2. Inspecting, testing, and reporting on condition of plant specifically to determine the need for repairs, replacements, rearrangements and changes and inspecting and testing the adequacy of repairs which have been made.

Note that the USoA, as adopted by the FERC, differentiates between "major" utilities and smaller ones, with more detailed instructions and requirements placed on the larger companies. This

differentiation offers the regulator some flexibility in determining how to apply the USoA requirements to utilities of various sizes, and also an opportunity to phase in the requirements by, for example, first instituting the requirements set forth for smaller utilities. Since the essential requirements and numbering scheme remain the same, transition to the more robust requirements of the “major” utilities would be relatively straightforward.

3.5. Charts of Accounts (COA)

The USoA provides a detailed and comprehensive set of accounts, organized into the following categories:

- 00-199 Assets and other debits.*
- 200-299 Liabilities and other credits.*
- 300-399 Plant accounts.*
- 400-432, 434-435 Income accounts.*
- 433, 436-439 Retained earnings accounts.*
- 440-459 Revenue accounts.*
- 500-599 Production, transmission and distribution expenses.*
- 900-949 Customer accounts, customer service and informational, sales, and general and administrative expenses.*

The charts of accounts are organized into broad categories, with accounts 100 through 299 covering balance sheet accounts; 300 through 399 plant accounts; 400 through 459 covering income and related accounts (including summary expense data); and 500 through 949 expense accounts. Note that there are no accounts in the 600, 700 or 800 series.

3.6. Balance Sheet Accounts

The balance sheet accounts are summary accounts, showing the totals drawn from other more granular accounts. As shown in the example for electric plant in service, the USoA provides an instruction for each account, often cross-referencing other accounts as the source or indicating related accounts.

ASSETS AND OTHER DEBITS

I. Utility Plant

101 Electric plant in service (Major only).

A. This account shall include the original cost of electric plant, included in accounts 301 to 399, prescribed herein, owned and used by the utility in its electric utility operations, and having an expectation of life in service of more than one year from date of installation, including such property owned by the utility but held by nominees. (See also account 106 for unclassified construction costs of completed plant actually in service.)

Here is an example of a filing (an annual report by DTE Electric Company to FERC) showing part of the contents of the balance sheet accounts:⁵

⁵ This chart and the others reproduced in this primer can be found in the full DTE filing for 4Q18 available at “FERC: Documents and Filing,” FERC Federal Energy Regulatory Commission, <https://www.ferc.gov/docs-filing/elibrary.asp>.

| Line No. | Title of Account (a) | Ref. Page No. (b) | Current Year End of Quarter/Year Balance (c) | Prior Year End Balance 12/31 (d) |
|----------|---|-------------------------|---|---|
| 1 | UTILITY PLANT | | | |
| 2 | Utility Plant (101-106, 114) | 200-201 | 22,507,948,332 | 21,457,335,008 |
| 3 | Construction Work in Progress (107) | 200-201 | 1,393,970,434 | 1,093,372,192 |
| 4 | TOTAL Utility Plant (Enter Total of lines 2 and 3) | | 23,901,918,766 | 22,550,707,200 |
| 5 | (Less) Accum. Prov. for Depr. Amort. Depl. (108, 110, 111, 115) | 200-201 | 7,638,679,804 | 7,435,654,746 |
| 6 | Net Utility Plant (Enter Total of line 4 less 5) | | 16,263,238,962 | 15,115,052,454 |
| 7 | Nuclear Fuel in Process of Ref., Conv., Enrich., and Fab. (120.1) | 202-203 | 3,061,520 | 5,819,866 |
| 8 | Nuclear Fuel Materials and Assemblies-Stock Account (120.2) | | 0 | 0 |
| 9 | Nuclear Fuel Assemblies in Reactor (120.3) | | 303,375,505 | 306,010,194 |
| 10 | Spent Nuclear Fuel (120.4) | | 1,120,432,967 | 1,042,612,109 |
| 11 | Nuclear Fuel Under Capital Leases (120.6) | | 0 | 0 |
| 12 | (Less) Accum. Prov. for Amort. of Nucl. Fuel Assemblies (120.5) | 202-203 | 1,272,241,445 | 1,227,041,582 |
| 13 | Net Nuclear Fuel (Enter Total of lines 7-11 less 12) | | 154,628,547 | 127,400,587 |
| 14 | Net Utility Plant (Enter Total of lines 6 and 13) | | 16,417,867,509 | 15,242,453,041 |

Note that the annual report clearly shows from which account and subaccount each figure is taken. This report also allows for immediate comparison with the prior year's figures.

Construction work in progress tends to be an important regulatory issue, namely the extent to which recovery should be allowed. Account 107 shows the amounts that would be involved. Here is a portion of the same company's report for that account:

| CONSTRUCTION WORK IN PROGRESS - - ELECTRIC (Account 107) | | |
|--|---------------------------------------|--|
| 1. Report below descriptions and balances at end of year of projects in process of construction (107) | | |
| 2. Show items relating to "research, development, and demonstration" projects last, under a caption Research, Development, and Demonstrating (see Account 107 of the Uniform System of Accounts) | | |
| 3. Minor projects (5% of the Balance End of the Year for Account 107 or \$1,000,000, whichever is less) may be grouped. | | |
| Line No. | Description of Project (a) | Construction work in progress - Electric (Account 107) (b) |
| 1 | Purchase Spare RFPT Rotor | 3,190,623 |
| 2 | RB5 Kelly Building Renovation | 1,370,618 |
| 3 | Refurbish Low Pressure Turbine | 9,795,042 |
| 4 | Regional Asset Health Improvement NW | 1,664,730 |
| 5 | Reliability 0104 MALTA Sub Switchgear | 7,807,122 |

Another set of accounts provides information concerning non-utility property. This information is especially important where, for example, the utility is permitted to engage in non-utility and/or competitive activities. Where that is the case, regulators generally act to ensure that customers of the basic utility activities are insulated from the risks of the non-utility activity.

2. Other Property and Investments

121 Nonutility property.

In the case of the sample company, as shown below, there is a subsidiary engaged in non-utility activities that shows negative retained earnings, suggesting it has operated at a loss. This is the kind of information that the regulator should have in determining the proper treatment of the relationship between the utility and non-utility aspects of the business.

| INVESTMENTS IN SUBSIDIARY COMPANIES (Account 123.1) | | | | |
|---|----------------------------------|----------------------|-------------------------|--|
| 1. Report below investments in Accounts 123.1, investments in Subsidiary Companies. 2. Provide a subheading for each company and List there under the information called for below. Sub - TOTAL by company and give a TOTAL in columns (e),(f),(g) and (h) (a) Investment in Securities - List and describe each security owned. For bonds give also principal amount, date of issue, maturity and interest rate. (b) Investment Advances - Report separately the amounts of loans or investment advances which are subject to repayment, but which are not subject to current settlement. With respect to each advance show whether the advance is a note or open account. List each note giving date of issuance, maturity date, and specifying whether note is a renewal. 3. Report separately the equity in undistributed subsidiary earnings since acquisition. The TOTAL in column (e) should equal the amount entered for Account 418.1. | | | | |
| Line No. | Description of Investment (a) | Date Acquired (b) | Date Of Maturity (c) | Amount of Investment at Beginning of Year (d) |
| 1 | The Edison Illuminating Company | 12/31/1935 | | |
| 2 | Common Stock | | | 196,500 |
| 3 | Retained Earnings | | | -59,729 |
| 4 | Subtotal | | | 136,771 |
| 5 | | | | |
| 6 | | | | |
| 7 | St Clair Energy Corporation | 12/31/1907 | | |
| 8 | Common Stock | | | 816 |
| 9 | Retained Earnings | | | -1,984 |
| 10 | Subtotal | | | -1,168 |

Capital accounts provide information about the financing of the utility. The information allows the regulator to calculate the leverage (i.e., debt/equity ratio) of the utility and also to observe directly the cost of the debt. This information is important in determining the rate of return to be allowed on the utility's rate base. Note that the market price of the stock is not reported; that price is readily observable in the equity markets, and information on the charts of accounts would be out of date virtually the minute it was entered.

LIABILITIES AND OTHER CREDITS

5. Proprietary Capital

201 Common stock issued.

202 Common stock subscribed (Major only).

203 Common stock liability for conversion (Major only).

204 Preferred stock issued.

205 Preferred stock subscribed (Major only).

| CAPITAL STOCKS (Account 201 and 204) | | | | |
|---|---|---|--------------------------------------|----------------------------------|
| 1. Report below the particulars (details) called for concerning common and preferred stock at end of year, distinguishing separate series of any general class. Show separate totals for common and preferred stock. If information to meet the stock exchange reporting requirement outlined in column (a) is available from the SEC 10-K Report Form filing, a specific reference to report form (i.e., year and company title) may be reported in column (a) provided the fiscal years for both the 10-K report and this report are compatible. 2. Entries in column (b) should represent the number of shares authorized by the articles of incorporation as amended to end of year. | | | | |
| Line No. | Class and Series of Stock and Name of Stock Series (a) | Number of shares Authorized by Charter (b) | Par or Stated Value per share (c) | Call Price at End of Year (d) |
| 1 | Account 201 | | | |
| 2 | Common Stock | 400,000,000 | 10.00 | |
| 3 | | | | |
| 4 | TOTAL COMMON STOCK | 400,000,000 | | |
| 5 | | | | |
| 6 | Account 204 | | | |
| 7 | Preferred Stock Cumulative | 6,747,484 | 100.00 | |
| 8 | | | | |
| 9 | TOTAL PREFERRED STOCK | 6,747,484 | | |
| 10 | | | | |
| 11 | Cumulative Preference Stock | 30,000,000 | 1.00 | |
| 12 | | | | |
| 13 | TOTAL PREFERENCE STOCK | 30,000,000 | | |

6. Long-Term Debt

221 Bonds.

| LONG-TERM DEBT (Account 221, 222, 223 and 224) | | | |
|---|--|---|--|
| <p>1. Report by balance sheet account the particulars (details) concerning long-term debt included in Accounts 221, Bonds, 222, Reacquired Bonds, 223, Advances from Associated Companies, and 224, Other long-Term Debt.</p> <p>2. In column (a), for new issues, give Commission authorization numbers and dates.</p> <p>3. For bonds assumed by the respondent, include in column (a) the name of the issuing company as well as a description of the bonds.</p> <p>4. For advances from Associated Companies, report separately advances on notes and advances on open accounts. Designate demand notes as such. Include in column (a) names of associated companies from which advances were received.</p> <p>5. For receivers, certificates, show in column (a) the name of the court -and date of court order under which such certificates were issued.</p> <p>6. In column (b) show the principal amount of bonds or other long-term debt originally issued.</p> <p>7. In column (c) show the expense, premium or discount with respect to the amount of bonds or other long-term debt originally issued.</p> <p>8. For column (c) the total expenses should be listed first for each issuance, then the amount of premium (in parentheses) or discount. Indicate the premium or discount with a notation, such as (P) or (D). The expenses, premium or discount should not be netted.</p> <p>9. Furnish in a footnote particulars (details) regarding the treatment of unamortized debt expense, premium or discount associated with issues redeemed during the year. Also, give in a footnote the date of the Commission's authorization of treatment other than as specified by the Uniform System of Accounts.</p> | | | |
| Line No. | Class and Series of Obligation, Coupon Rate (For new issue, give commission Authorization numbers and dates) (a) | Principal Amount Of Debt issued (b) | Total expense, Premium or Discount (c) |
| 1 | Account 221 - Senior Notes | | |
| 2 | (Secured by General and Refunding Mortgage Bonds) | | |
| 3 | 2002 Series B, 6.35% - #110005 | 225,000,000 | 2,152,605 |
| 4 | - 110005 (Continued) | | 1,516,500 D |
| 5 | 2005 Series B, 5.45% - #110008 | 200,000,000 | 2,051,757 |
| 6 | - 110008 (Continued) | | 824,000 D |

3.7. Electric Plant Accounts

The charts of accounts present the details concerning the original cost of the utility's plant, together with the revenues and expenses. Together with the supporting documentation, the data in these accounts provide a complete and detailed "money trail" that reveals the financial elements of the utility.

1. Intangible Plant

...

2. Production Plant

...

353 Station equipment.

This account shall include the cost installed of transforming, conversion, and switching equipment used for the purpose of changing the characteristics of electricity in connection with its transmission or for controlling transmission circuits.

...

4. Distribution Plant

...

362 Station equipment.

...

6. General Plant

...

390 Structures and improvements.

Here is an example of the material in some of the electric plant accounts; in this report, the beginning balance for the year is shown together with additions during the year, as opposed to presenting year end balances for both the prior and immediate past year. Both methods provide the same information,

but for the more detailed presentation in the 300 series accounts, it may be useful to be able to see at a glance where the substantial additions have been made. The exact manner in which USoA data are presented to the regulator is, of course, for each regulatory body to determine; what is essential is that the full USoA data be collected by the utility and available to the regulator.

| 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 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) | | | |
| Line No. | Account (a) | Balance Beginning of Year (b) | Additions (c) |
| 1 | 1. INTANGIBLE PLANT | | |
| 2 | (301) Organization | | |
| 3 | (302) Franchises and Consents | | |
| 4 | (303) Miscellaneous Intangible Plant | 784,902,571 | 96,753,929 |
| 5 | TOTAL Intangible Plant (Enter Total of lines 2, 3, and 4) | 784,902,571 | 96,753,929 |
| 6 | 2. PRODUCTION PLANT | | |
| 7 | A. Steam Production Plant | | |
| 8 | (310) Land and Land Rights | 14,251,766 | |
| 9 | (311) Structures and Improvements | 1,130,352,976 | 28,088,517 |
| 10 | (312) Boiler Plant Equipment | 5,452,064,156 | 170,549,720 |
| 11 | (313) Engines and Engine-Driven Generators | | |

3.8. Income Accounts

The 400 series accounts provide a summary of revenues and expenses relating to utility operation, allowing the utility and regulator to determine quickly the overall profitability of the utility. The details concerning expenses are contained in the 500 and 900 series.

I. Utility Operating Income

400 Operating revenues.

There shall be shown under this caption the total amount included in the electric operating revenue accounts provided herein.

| ELECTRIC OPERATING REVENUES (Account 400) | | | |
|--|--|--|---|
| 1. The following instructions generally apply to the annual version of these pages. Do not report quarterly data in columns (c), (e), (f), and (g). Unbilled revenues and MWH related to unbilled revenues need not be reported separately as required in the annual version of these pages. 2. Report below operating revenues for each prescribed account, and manufactured gas revenues in total. 3. Report number of customers, columns (f) and (g), on the basis of meters, in addition to the number of flat rate accounts; except that where separate meter readings are added for billing purposes, one customer should be counted for each group of meters added. The average number of customers means the average of twelve figures at the close of each month. 4. If increases or decreases from previous period (columns (c), (e), and (g)), are not derived from previously reported figures, explain any inconsistencies in a footnote. 5. Disclose amounts of \$250,000 or greater in a footnote for accounts 451, 456, and 457.2. | | | |
| Line No. | Title of Account (a) | Operating Revenues Year to Date Quarterly/Annual (b) | Operating Revenues Previous year (no Quarterly) (c) |
| 1 | Sales of Electricity | | |
| 2 | (440) Residential Sales | 2,491,361,291 | 2,309,609,277 |
| 3 | (442) Commercial and Industrial Sales | | |
| 4 | Small (or Comm.) (See Instr. 4) | 1,798,310,545 | 1,757,934,442 |
| 5 | Large (or Ind.) (See Instr. 4) | 685,985,665 | 666,981,603 |
| 6 | (444) Public Street and Highway Lighting | 53,376,333 | 57,660,522 |
| 7 | (445) Other Sales to Public Authorities | | |
| 8 | (446) Sales to Railroads and Railways | | |
| 9 | (448) Interdepartmental Sales | | |
| 10 | TOTAL Sales to Ultimate Consumers | 5,029,033,834 | 4,792,185,844 |

401 Operation expense.

There shall be shown under this caption the total amount included in the electric operation expense accounts provided herein. (See note to operating expense instruction 3.)

402 Maintenance expense.

There shall be shown under this caption the total amount included in the electric maintenance expense accounts provided herein.

403 Depreciation expense.

A. This account shall include the amount of depreciation expense for all classes of depreciable electric plant in service except such depreciation expense as is chargeable to clearing accounts or to account 416, Costs and Expenses of Merchandising, Jobbing and Contract Work.

B. The utility shall keep such records of property and property retirements as will reflect the service life of property which has been retired and aid in estimating probable service life by mortality, turnover, or other appropriate methods; and also such records as will reflect the percentage of salvage and costs of removal for property retired from each account, or subdivision thereof, for depreciable electric plant.

Note again the emphasis on keeping proper records.

3.9. Operation and Maintenance Expense Accounts

2. Transmission Expenses

Operation

560 Operation supervision and engineering.

561.1 Load dispatch - Reliability.

...

| | | | |
|----|--|-------------|-------------|
| 81 | 2. TRANSMISSION EXPENSES | | |
| 82 | Operation | | |
| 83 | (560) Operation Supervision and Engineering | | |
| 84 | | | |
| 85 | (561.1) Load Dispatch-Reliability | | |
| 86 | (561.2) Load Dispatch-Monitor and Operate Transmission System | | |
| 87 | (561.3) Load Dispatch-Transmission Service and Scheduling | | |
| 88 | (561.4) Scheduling, System Control and Dispatch Services | 11,692,353 | 11,171,591 |
| 89 | (561.5) Reliability, Planning and Standards Development | | |
| 90 | (561.6) Transmission Service Studies | | |
| 91 | (561.7) Generation Interconnection Studies | | |
| 92 | (561.8) Reliability, Planning and Standards Development Services | 840,711 | 803,267 |
| 93 | (562) Station Expenses | 13,934 | 1,739 |
| 94 | (563) Overhead Lines Expenses | | |
| 95 | (564) Underground Lines Expenses | | |
| 96 | (565) Transmission of Electricity by Others | 310,083,611 | 312,253,332 |
| 97 | (566) Miscellaneous Transmission Expenses | 21,291,453 | 24,781,809 |
| 98 | (567) Rents | | |
| 99 | TOTAL Operation (Enter Total of lines 83 thru 98) | 343,922,062 | 349,011,738 |

4. Distribution Expenses

Operation

580 Operation supervision and engineering.

581 Load dispatching (Major only).

581.1 Line and station expenses (Nonmajor only).

582 Station expenses (Major only).

583 Overhead line expenses (Major only).

*Maintenance**590 Maintenance supervision and engineering (Major only).**591 Maintenance of structures (Major only).**592 Maintenance of station equipment (Major only).**592.1 Maintenance of structures and equipment (Nonmajor only)*

| | | | |
|-----|--|-------------|-------------|
| 132 | 4. DISTRIBUTION EXPENSES | | |
| 133 | Operation | | |
| 134 | (580) Operation Supervision and Engineering | 49,294,195 | 46,103,293 |
| 135 | (581) Load Dispatching | 910,548 | 1,232,716 |
| 136 | (582) Station Expenses | 7,984,619 | 6,068,719 |
| 137 | (583) Overhead Line Expenses | 6,157,414 | 6,471,735 |
| 138 | (584) Underground Line Expenses | 1,490,615 | 1,314,582 |
| 139 | (585) Street Lighting and Signal System Expenses | | |
| 140 | (586) Meter Expenses | 7,438,402 | 6,827,981 |
| 141 | (587) Customer Installations Expenses | 279,300 | 274,760 |
| 142 | (588) Miscellaneous Expenses | 24,232,287 | 23,480,354 |
| 143 | (589) Rents | 1,962 | 1,819 |
| 144 | TOTAL Operation (Enter Total of lines 134 thru 143) | 97,789,342 | 91,775,959 |
| 145 | Maintenance | | |
| 146 | (590) Maintenance Supervision and Engineering | 3,257,809 | 3,261,112 |
| 147 | (591) Maintenance of Structures | 1,350,968 | 1,471,091 |
| 148 | (592) Maintenance of Station Equipment | 21,451,621 | 25,814,057 |
| 149 | (593) Maintenance of Overhead Lines | 149,680,873 | 164,755,876 |
| 150 | (594) Maintenance of Underground Lines | 10,724,711 | 14,815,427 |
| 151 | (595) Maintenance of Line Transformers | | |
| 152 | (596) Maintenance of Street Lighting and Signal Systems | 2,830,639 | 2,656,289 |
| 153 | (597) Maintenance of Meters | | |
| 154 | (598) Maintenance of Miscellaneous Distribution Plant | | |
| 155 | TOTAL Maintenance (Total of lines 146 thru 154) | 189,296,621 | 212,773,852 |
| 156 | TOTAL Distribution Expenses (Total of lines 144 and 155) | 287,085,963 | 304,549,811 |

The overview and examples from the USoA summarized above show the logic behind the USoA as a way of collecting and presenting the financial data that are essential to both the utility itself and the regulator seeking to ensure that rates are just and reasonable. The USoA is largely self-contained, in that the instructions are presented in the USoA itself, and do not require reference to external sources (such as GAAP). This is not to say that issues of interpretation will not arise: for example, depreciation rates tend to be controversial, and the USoA does not dictate exactly how those rates should be calculated. Even in that case, however, the USoA provides a firm foundation on which those disputes can be resolved.

The USoA thus meets the criteria for a sound regulatory accounting system for utilities. It is comprehensive, captures the entirety of the utility's financial activities, and allows high level of granularity. The division into major categories and multiple levels of sub-categories permits both rapid assessment and detailed examination of financial operations. The usefulness of the USoA has been tested through extensive use by utilities and regulators throughout the United States and elsewhere, and that use, reflected in myriad regulatory decisions, provides useful information about how accounting and financial issues have been resolved in other jurisdictions.

For four presentations illustrating the use and value of the USoA in the context of utility regulation in emerging economies, see Appendix B.

4. Adoption Issues

Moving from one system of accounting to another is never a trivial exercise, even where both systems are robust. The move can be even more daunting where, as is often the case in emerging economies, or a utility has been subject to direct government control, and/or the existing system has not been designed, or implemented, to capture the relevant accounting data in a complete or coherent manner.

4.1. Process

Where a regulatory agency (or parliament, or utility) determines, based on the reasonable conclusion that sound accounting practices are essential to good management and regulation, to move to the USoA (or to a comparably robust system), there are several important steps to plan and execute.

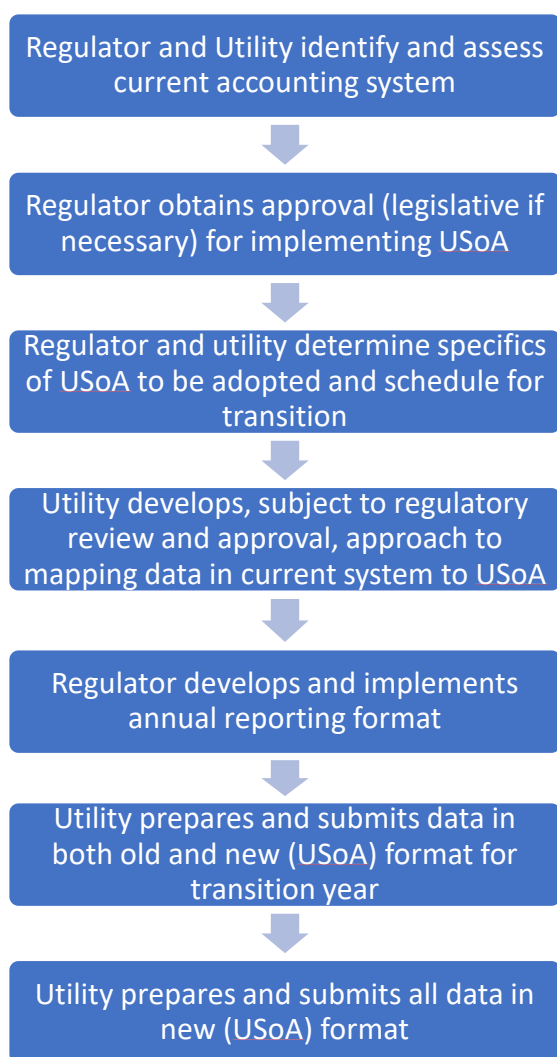
First, secure all necessary approvals and authority for moving to the new system. While the authority of regulatory agencies is generally broad and may include determining the manner in which utilities collect and present information, ensuring clear authority is likely to help eliminate time-consuming litigation that would delay implementation.

Second, ensure that the underlying data are collected and preserved. In some cases, for example, records of the cost of plant that may have been put into service many years before, and it may be necessary to use estimates. If estimates are used, however, those should be documented in a transparent manner.

Third, the utility should, with guidance from the regulator, develop a transparent methodology to “map” the data in the existing system to the USoA. It is likely that the categories will not match exactly, and that the level of detail will differ. It will be important for the utility, again in consultation with the regulator, to make reasonable judgments concerning how costs and revenues recorded in the existing system should be recorded in the USoA. Again, records of how one set of accounts is mapped to the USoA should be preserved and available for regulatory review.

Finally, it is worth considering, for at least the first year of implementation, for the utility to use both sets of accounts, i.e., both the existing system and the USoA. This approach, while challenging logistically, will help inform the mapping process and also allow the utility to work out any “bugs” in the move to the new system.⁶

⁶ For an “action plan” submitted by a Canadian utility for moving to the USoA, see “British Columbia Hydro and Power Authority F2012 to F2014 Revenue Requirements Application,” British Columbia Utilities Commission, https://www.bcuc.com/Documents/Proceedings/2011/DOC_27251_A2-4_BCH-Action-Plan-Implement-USoA.pdf. The steps shown in that action plan are reproduced as Appendix D.



Each step in the process should be accomplished through a transparent process involving, at least, the regulator, the ministry (and other relevant government agencies, including the tax authority), investors, and customers. The timing and "deliverables" at each stage should be established at the outset, with provision for adjustments to the schedule as circumstances require.

It is likely to be helpful during this process to engage other regulatory commissions, and regional organizations, to gain the benefit of their experience and improve the prospects for regional consistency.

One example of the steps taken by a utility to implement the USoA is set forth in Appendix D. In that example, a utility in British Columbia (Canada) submitted a detailed action plan, expanding on the steps outlined above. Each regulatory body, working with the utility and (where appropriate) other government agencies, should develop a plan that best reflects local conditions, including technical and administrative capacity as well as the legacy accounting and reporting systems.

4.2. Challenges

Many utilities (and ministries or other government agencies that own or control a utility) are reluctant to share financial data, and this reluctance may extend to the manner of data collection and presentation.

The reluctance may be especially acute where, as may be the case where there is wide regional adoption of the USoA, the utility is concerned that its own performance with respect to costs will not compare favorably with other utilities. The regulator should work diligently with the utility (and/or the ministry), and exercise its authority when necessary, to overcome this reluctance. It is vital that the regulator have access to the greatest practicable amount of information about the utility's revenues, investments and costs. Moreover, it is important that this information be available to the public.⁷ The failure to obtain, and make public, such information would compromise the transparency and accountability essential to good regulation.

All of the excerpted material in this primer from DTE Electric Company is, like all the rest of the financial data drawn from the USoA and reported to the FERC, readily available to anyone with access to the internet. See, e.g., <https://www.ferc.gov/docs-filing/elibrary.asp>, which allows a search of all public FERC documents, including all Form 1 filings by all jurisdictional utilities. Regulators, utilities, government agencies, the public, and others involved in policy and proceedings relating to utilities all

⁷ Some information, including material that would give the utility's competitors an unfair advantage, or material the release of which would create a security risk, might reasonably be withheld from the public, but *all* information should be available to the regulator. Moreover, claims by the utility of a need for confidential treatment should be subject to regulatory review and approval. The fact that information might prove embarrassing to the utility is not a sufficient reason to hide the information from the public.

benefit from this body of readily available detailed information. It is worth considering how to make these benefits as broadly available as possible.

Another challenge is securing the resources needed by both the utility and the regulator to move to the new system. The move is not likely to require new accounting expertise; there is nothing in the USoA that would be unfamiliar to anyone with accounting training and experience. There may, however, be additional information systems that need to be adopted by the utility in order to incorporate the USoA fully into the utility's financial, budgeting, and regulatory activities.

An additional challenge will be in establishing the protocols for collecting the information, both from historical records if necessary and in any case on an ongoing basis, and finding the people with the time to accomplish the transitional tasks. Once the transition is complete, entries can be routine and mechanized, and should not create an undue burden on the utility. Once the decision to move to the new system is made, it is likely to be useful to both the utility and the regulator to convene a process to plan, and staff, the transition effort. In this context, there have already been some efforts in the region to move to the USoA; drawing on that experience (an example of which is described in Appendix C) is likely to prove useful.⁸

4.3. Recent Efforts to Implement the USoA

The National Energy Regulator of South Africa has adopted the USoA⁹. The Electricity Regulatory Authority of Uganda is in the process of monitoring the implementation of the USoA for its major utility, UEGCL.¹⁰ An effort to adopt the USoA is also underway in Ethiopia.¹¹

The utilities subject to oversight by the Georgian National Energy and Water Supply Regulatory Commission are also subject to a Uniform System of Accounting. The authority for this requirement is in Article 46 of the Law of Georgia on Electricity and Natural Gas.¹²

⁸ Appendix C describes a recent project involving utility regulators, NARUC and USAID. This primer is a part of NARUC's and USAID's commitment to provide information and assistance to regulators in developing the tools to facilitate effective regulation of utilities.

⁹ "ERA Consults Stakeholders on the Uniform System of Accounts," Electricity Regulatory Authority, <https://www.era.or.ug/index.php/media-centre/what-s-new/239-era-consults-stakeholders-on-the-uniform-system-of-accounts/>.

¹⁰ "Annual Report 2017-18," Electricity Regulatory Authority, <https://www.era.or.ug/index.php/resource-centre/publications/annual-reports/>.

¹¹

"Ethiopian Regulators Initiate Implementation of a Uniform System of Accounts," NARUC, <https://www.naruc.org/bulletin/the-bulletin-122116/ethiopian-regulators-initiate-implementation-of-a-uniform-system-of-accounts/>.

¹² "Law of Georgia on Electricity and Natural Gas," Georgian National Energy and Water Supply Regulatory Commission, http://gnerc.org/files/Acts%20in%20english/Georgian%20Law%20on%20Electricity%20&%20Natural%20Gas_opt.pdf. See, also, "Completed Projects," Georgian National Energy and Water Supply Regulatory Commission, <http://gnerc.org/en/international/proeqtebi-da-programebi/completed>.

5. Conclusion and Recommendations

The adoption of the USoA for regulated utilities will provide significant benefits to the utility's ability to assess its business, and, as important, will enhance the regulator's ability to carry out its obligation to ensure that utility services are being provided at just and reasonable rates. Moreover, the data collected pursuant to the USoA will allow useful comparisons over time and among utilities, enhancing transparency and highlighting areas where further utility and regulatory examination is warranted. Finally, as economies become increasingly global, broad adoption of the USoA will provide a degree of commonality among financial reporting systems that will increase the confidence of prospective investors.

Moving from the legacy accounting system to the USoA will require careful, thoughtful, and transparent effort by both the utility and the regulator. Following the process elements described above can help ensure a successful transition.

Appendix A: Useful resources

Text of USoA:

Subchapter C – Accounts, Federal Power Act, <https://www.govinfo.gov/content/pkg/CFR-2011-title18-vol1/pdf/CFR-2011-title18-vol1-part101.pdf>.

“18 CFR Part 101 – Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act,” Legal Information Institute, <https://www.law.cornell.edu/cfr/text/18/part-101>.

FERC library, which gives access to all FERC Form 1 submissions, which show data from USoA accounts:

“FERC: Documents and Filing,” FERC Federal Energy Regulatory Commission, <https://www.ferc.gov/docs-filing/elibrary.asp>.

“U.S Regulatory Accounting Systems in Practice,” NARUC, <https://pubs.naruc.org/pub.cfm?id=53838481-2354-D714-511F-7ED1F6835B8F>.

Discussion of the consistency between USoA and GAAP:

“Overview of Accounting Systems,” NARUC, <https://pubs.naruc.org/pub.cfm?id=538E66C7-2354-D714-51E9-23D0C31CD7BB>

Discussion of adoption of USoA:

Public Utility Accounting: A Public Power System's Introduction to the Federal Energy Regulatory Commission Uniform System of Accounts (Arlington: American Public Power Association, 2012), <https://www.publicpower.org/system/files/documents/Public%20Utility%20Accounting%20Manual%202018.pdf>.

Examples of recent adoption and adoption efforts:

“ERA Consults Stakeholders on the Uniform System of Accounts,” Electricity Regulatory Authority, <https://www.era.or.ug/index.php/media-centre/what-s-new/239-era-consults-stakeholders-on-the-uniform-system-of-accounts>.

Uganda commission Annual report for FY 17-18 at p. 97, available at “Annual Report 2017-18,” Electricity Regulatory Authority, <https://www.era.or.ug/index.php/resource-centre/publications/annual-reports>. (Uganda)

“Ethiopian Regulators Initiate Implementation of a Uniform System of Accounts,” NARUC, <https://www.naruc.org/bulletin/the-bulletin-122116/ethiopian-regulators-initiate-implementation-of-a-uniform-system-of-accounts/>. (Ethiopia)

“Law of Georgia on Electricity and Natural Gas,” Georgian National Energy and Water Supply Regulatory Commission, http://gnerc.org/files/Acts%20in%20english/Georgian%20Law%20on%20Electricity%20&%20Natural%20Gas_opt.pdf.

See, also, “Completed Projects,” Georgian National Energy and Water Supply Regulatory Commission, <http://gnerc.org/en/international/proeqtebi-da-programebi/completed>. (Georgia)

Appendix B: Presentations Relating to USoA Adoption (Africa)

Critical Thinking and Use of USOA Data

Ms. Denise Parrish
Deputy Administrator
Wyoming Office of Consumer Advocate
Wyoming Public Service Commission
Denise.Parrish@wpsc.wyo.gov

October 12-14, 2016
Kigali, Rwanda

CONTEXT OF THE DISCUSSION

- We have spent time discussing how to collect data in a useful and consistent format needed for various regulatory purposes.
- Once the data is available, what are some ways that the information can be used to help regulators in their duties?

TRENDING AND BENCHMARKING

- Benchmarking** can assist one by allowing for comparison of similar data, information, statistics, among companies.
 - Allows one to assess how well a utility is doing compared to other similarly situated utilities
 - Assists in focusing questions to be asked about comparative results
- Trending** can be used to measure changes in a utility's performance, costs, etc. over time
 - Consistent data measurements over time allows one to see changes
 - Helps to focus questions to be asked

Revenues

Performance

Operating Expenses (\$000)

| | 2012 | 2013 | 2014 | 2015 | % Change |
|--------------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| Steam Power | \$310,798 | \$310,596 | \$312,867 | \$312,187 | 0.5% |
| Hydraulic Power | \$35,580 | \$37,983 | \$36,009 | \$38,922 | 9.4% |
| Other Power | \$49,690 | \$59,983 | \$60,649 | \$53,851 | 8.4% |
| Transmission | \$195,628 | \$204,716 | \$206,484 | \$198,670 | 1.6% |
| Distribution | \$208,550 | \$215,100 | \$203,678 | \$208,439 | 0% |
| Customer Accounts | \$221,695 | \$205,456 | \$198,489 | \$204,138 | (7.9%) |
| Administrative & General | \$146,076 | \$152,657 | \$188,239 | \$175,800 | 20.3% |
| TOTAL | \$1,167,990 | \$1,186,493 | \$1,206,418 | \$1,192,008 | 2.1% |

Incentive Compensation

USE OF CONSISTENTLY REPORTED DATA

Comparative Data allows for Identification of Trends and Problems

Administrative and General Cost per Customer

Data taken from series of pricing cases and compliance filings from a single provider over a 10 year period






ANOTHER COMPARISON




Annual Maintenance Expense as % of Net Plant

Additional Discussion?

Good Luck and Thank You!!

| | | |
|---|---|--|
|  <h2 style="text-align: center;">IV. USofA Value Added - Cost-of-Service</h2> <p style="text-align: center;">Lucretia A. Smith Tuesday, January 29, 2019</p> |  <h3 style="text-align: center;">IV. Presentation: USofA Value Added - Cost-of-Service</h3> <ul style="list-style-type: none"> This session will discuss data collection in terms of prioritization of improvement and tools to assist utilities in improving the development of cost based rates. It will also discuss the role of the USofA transmission wheeling and regional transmission organizations for future industry development. |  <h3 style="text-align: center;">Applicability of USofA</h3> <ul style="list-style-type: none"> The USofA can provide a basis for separating cost <ul style="list-style-type: none"> Costs can be recorded as detailed as necessary, by individual plant or individual unit, if generation facility is a multi-unit facility Costs can be recorded based upon location or run of transmission or distribution lines USofA provides similar basis for breaking down capital costs as well as operating and maintenance costs <ul style="list-style-type: none"> For example, a classification number can be assigned to all costs related to Generation Plant X, as well as Units 1 and 2 of plant. To the extent costs are common to the operation of multiple facilities, the USofA will allow for the allocation of those costs to each facility |
|  <h3 style="text-align: center;">Application of USofA</h3> <ul style="list-style-type: none"> USofA can be helpful to determine whether costs are fixed or variable <ul style="list-style-type: none"> Variable costs changed based upon the capacity of the facility although not in the same proportion – generation could decrease by 10% but fuel costs might decrease only by 5% Fixed costs or sunk costs remain whether the facility is used or not and will not change on a short-term basis except for <ul style="list-style-type: none"> Large load added on – a industrial customer requires a transmission or distribution main different from what is currently available (three-phase vs. single phase in the U.S.) Facility can only serve certain capacity and once reached a new facility is necessary |  <h3 style="text-align: center;">Cost of Service Rates</h3> <ul style="list-style-type: none"> After ascertaining the total of all costs related to service to be provided, one can determine the rates to be charged and the rate design using a cost of service study. Costs can come from USofA but other information will be necessary such as: <ul style="list-style-type: none"> If to be calculated on a per unit basis: <ul style="list-style-type: none"> What is the capacity What portion of the capacity is available for service If to be calculated based upon customers to be served: <ul style="list-style-type: none"> Which customer classes will be served and what is the estimated load Will the service be provided on a firm or interruptible basis |  <h3 style="text-align: center;">Cost of Service Rates</h3> <ul style="list-style-type: none"> What are Cost of Service Rates? <ul style="list-style-type: none"> Rates set so that the total cost of providing service are recovered from the ratepayer Costs to be recovered include: <ul style="list-style-type: none"> Physical plant through depreciation Operating Costs – fuel, staffing, power, etc. Maintenance costs – repairs, cleaning, etc. Return or Profit on investment |
|  <h3 style="text-align: center;">Benefit of Cost of Service Determination</h3> <ul style="list-style-type: none"> Knowing how much it actually costs for each provided service allows the utility and regulator to determine: <ul style="list-style-type: none"> Are current rates covering the operating costs? If not, is it covering the variable costs? What portion of fixed costs are being recovered? What subsidy is being provided and where from – the shareholder or other customers? Is this situation likely to continue in the long-term or will it be changed based upon either service to new customers or reduction of costs? |  <h3 style="text-align: center;">Cost of Service Rates</h3> <ul style="list-style-type: none"> Cost of Service Rates can be developed for: <ul style="list-style-type: none"> Individual generating units Specific transmission or distribution lines Specific customer classes or individual customers To do so, the following inputs are necessary <ul style="list-style-type: none"> Operating costs for providing service Estimated capacity for each unit Capacity to be utilized Usage by customer class or specific customer |  <h3 style="text-align: center;">Cost of Service Studies</h3> <ul style="list-style-type: none"> Cost of Service Studies are done to develop cost of service rates using the utilities accounting data as a starting point COSS can be done internally or by using consultants Accounting records maintained using a USofA will result in less time being spent by the utility to gather information to do the study as use of the USofA does this on an ongoing basis The utility staff will spend less time explaining records to consultants The consultant costs will be lower because less time will be spent analyzing data and categorizing costs The consultant will likely be able to provide more concise bids if they are familiar with the USofA that is being used |
|  <h3 style="text-align: center;">USofA and Benchmarking</h3> <ul style="list-style-type: none"> Using the same USofA allows utility and regulator to compare: <ul style="list-style-type: none"> Operating costs of similarly situated facilities owned by utility Operating costs of facilities owned by others but providing service to the utility If the operating costs of facilities differ, USofA can help determine the cause and evaluate reasonableness of differences <ul style="list-style-type: none"> Were the construction costs higher Are the operating or maintenance costs higher - if so, why? <ul style="list-style-type: none"> Geographic region causing different shipping costs or labor costs |  <h3 style="text-align: center;">Benefit of Using East Africa USofA</h3> <ul style="list-style-type: none"> Outside parties looking to invest in region will be comparing information that was developed using similar criteria If you are to provide or procure services cross-border, are the rates being charged comparable to what the costs would be if generated or used at home Provides confidence to stakeholders (utility shareholders, customers, regulators, local governments) that rates have been developed on a reasonable basis Provides transparency regarding costs and what accounts those costs are recorded in |  <h3 style="text-align: center;">Prioritization of Cost based rates and USofA</h3> <h4 style="text-align: center;">Prioritization of Infrastructure Projects:</h4> <ul style="list-style-type: none"> How much does the project cost to build? How much will it cost to deliver the product to the ultimate customer? (Transmission lines/substations/distribution lines) How much revenue will it produce? <ul style="list-style-type: none"> What is the potential pool of customers? What are the class of customers? Do the customers have needs that require different equipment to connect? How consistent will the revenues be? What will the difference between the cost and revenues? |

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|  <p>Prioritization of Cost based rates and USofA</p> <ul style="list-style-type: none"> Can score each facility based upon cost and revenues A facility with low build costs will not be a priority if it can only reach a minimum of customers while a facility may be a priority if it can serve a larger customer base even if its per unit costs are higher The more reliable the data used to develop this information is the more reliable the results |  <p>Evaluating Requests for Service</p> <ul style="list-style-type: none"> An investor may express an interest in building a generating or micro-grid facility in a particular area and want to connect to the national utility grid to allow it to sell its product <ul style="list-style-type: none"> Utility needs to know what physical facilities are needed to connect facilities to its grid How much would those facilities cost? Will investor be willing to pay for entire cost of project? If not, will the utility have the ability to either use extra capacity itself or sell it to other parties and would that capacity usage be available immediately? The USofA gives the utility the ability to evaluate estimated costs based upon the actual cost of similar projects |  <p>Evaluating Requests for Service</p> <ul style="list-style-type: none"> Joint Venture Projects <ul style="list-style-type: none"> If utility is asked to partner with an entity, the use of a USofA both in the evaluation and operating stages will allow all parties to judge whether proposal is a good investment and the success of such ventures by comparing estimates prepared using the USofA and the accumulation of actual costs using the same USofA |
|  <p>USofA and Efficient Tariff Setting and Monitoring</p> <p>Lucretia Smith, CPA July 16, 2019 Lusaka, Zambia</p> |  <p>Presentation: USofA and Efficient Tariff Setting and Monitoring</p> <p>This session will discuss:</p> <ul style="list-style-type: none"> How the USofA can be used in setting tariffs (rates) in general and cost based specifically Evaluating performance through benchmarking How to interface the USofA with existing Charts of Account or other tariff setting tools |  <p>Electricity Tariff Filing Requirements and USofA</p> <ul style="list-style-type: none"> Zambia's Energy Regulation Board already has Electricity Tariff Filing Guidelines (March 2011) that are based on regulated entities books and records Use of USofA or Regulatory Accounts helps ensure that regulators, licensees and stakeholders all define the elements used in tariff (rate) setting the same way This will reduce questions during the review process making this review quicker Regulator can require mapping of existing chart of accounts to newly created USofA through Excel worksheets without having to revise existing system |
|  <p>Applicability of USofA</p> <ul style="list-style-type: none"> The USofA can provide a basis for separating costs <ul style="list-style-type: none"> Costs can be recorded as detailed as necessary, by individual plant or individual unit, if generation facility is a multi-unit facility Costs can be recorded based upon location or run of transmission or distribution lines USofA provides similar basis for breaking down capital costs as well as operating and maintenance costs <ul style="list-style-type: none"> For example, a classification number can be assigned to all costs related to Generation Plant X, as well as Units 1 and 2 of the plant. To the extent costs are common to the operation of multiple facilities, the USofA will allow for the allocation of those costs to each facility |  <p>Cost of Service Rates</p> <ul style="list-style-type: none"> What are Cost of Service Rates? <ul style="list-style-type: none"> Rates set so that the total cost of providing service are recovered from the ratepayer Costs to be recovered include: <ul style="list-style-type: none"> Physical plant through depreciation Operating Costs – fuel, staffing, power, etc. Maintenance costs – repairs, cleaning, etc. Return or profit on investment |  <p>Application of USofA</p> <ul style="list-style-type: none"> USofA can be helpful to determine whether costs are fixed or variable by requiring subaccounts for fixed and variable costs <ul style="list-style-type: none"> Variable costs change based upon the capacity of the facility although not in the same proportion – generation could decrease by 10% but fuel costs might decrease only by 5% Fixed costs or sunk costs remain whether the facility is used or not and will not change on a short-term basis except for <ul style="list-style-type: none"> Large load added on – a industrial customer requires a transmission or distribution main different from what is currently available (three-phase vs. single phase in the U.S.) Facility can only serve certain capacity, and once reached, a new facility is necessary |

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|  <p>Cost of Service Rates</p> <ul style="list-style-type: none"> After ascertaining the total of all costs related to service to be provided, one can determine the rates to be charged and the rate design using a cost of service study. Costs can come from USoA but other information will be necessary such as: <ul style="list-style-type: none"> If to be calculated on a per unit basis: <ul style="list-style-type: none"> What is the capacity? What portion of the capacity is available for service? If to be calculated based upon customers to be served: <ul style="list-style-type: none"> Which customer classes will be served and what is the estimated load? Will the service be provided on a firm or interruptible basis? |  <p>Cost of Service Rates</p> <ul style="list-style-type: none"> Cost of Service Rates can be developed for: <ul style="list-style-type: none"> Individual generating units Specific transmission or distribution lines Specific customer classes or individual customers To do so, the following inputs are necessary <ul style="list-style-type: none"> Operating costs for providing service Estimated capacity for each unit Capacity to be utilized Usage by customer class or specific customer |  <p>Benefit of Cost of Service Determination</p> <ul style="list-style-type: none"> Knowing how much it actually costs for each provided service allows the utility and regulator to determine: <ul style="list-style-type: none"> Are current rates covering the operating costs? If not, is it covering the variable costs? What portion of fixed costs are being recovered? What subsidy is being provided and where from – the shareholder or other customers? Is this situation likely to continue in the long-term or will it change based upon either service to new customers or reduction of costs? |
|  <p>Cost of Service Studies</p> <ul style="list-style-type: none"> Cost of Service Studies (COSS) are done to develop cost of service rates using the utilities' accounting data as a starting point COSS can be done internally or by using consultants Accounting records maintained using a USoA will result in less time being spent by the utility to gather information to do the study, as use of the USoA does this on an ongoing basis The utility staff will spend less time explaining records to consultants The consultant costs will be lower because less time will be spent analyzing data and categorizing costs The consultant will likely be able to provide more concise bids if they are familiar with the USoA that is being used |  <p>USoA and Benchmarking</p> <ul style="list-style-type: none"> Using the same USoA allows utility and regulator to compare: <ul style="list-style-type: none"> Operating costs of similarly situated facilities owned by utility Operating costs of facilities owned by others providing services to the utility Operating costs between periods as accounting will be standardized If the operating costs of facilities differ, USoA can help find the cause and evaluate reasonableness of differences <ul style="list-style-type: none"> Were the construction costs higher? <ul style="list-style-type: none"> Are the operating or maintenance costs higher? If so, why? <ul style="list-style-type: none"> Geographic region = different shipping/labor costs |  <p>Benefits of Using USoA Consistent With or Understandable by Surrounding Countries</p> <ul style="list-style-type: none"> Outside parties looking to invest in region will be comparing information that was developed using similar criteria If you are to provide or procure services cross-border, are the rates being charged comparable to what the costs would be if generated or used at home Provides confidence to stakeholders (utility shareholders, customers, regulators, local governments) that rates have been developed on a reasonable basis Provides transparency regarding costs and what accounts those costs are recorded in |
|  <p>Prioritization of Cost based Rates and USoA</p> <p>Prioritization of infrastructure projects:</p> <ul style="list-style-type: none"> How much does the project cost to build? How much will it cost to deliver the product to the ultimate customer? (Transmission lines/substations/distribution lines) How much revenue will it produce? <ul style="list-style-type: none"> What is the potential pool of customers? What are the class of customers? Do the customers have needs that require different equipment to connect? How consistent will the revenues be? What will be the difference between the cost and revenues? |  <p>Prioritization of Cost Based Rates and USoA</p> <ul style="list-style-type: none"> Can score each facility based upon cost and revenues A facility with low build costs will not be a priority if it can only reach a minimum of customers, while a facility with higher per unit costs may be a priority if it can serve a larger customer base The more reliable the data used to develop this information, the more reliable the results |  <p>Evaluating Requests for Service</p> <ul style="list-style-type: none"> An investor may express an interest in building a generating or micro-grid facility in a particular area and want to connect to the national utility grid to allow it to sell its product <ul style="list-style-type: none"> Utility needs to know what physical infrastructure is needed to connect facilities to its grid <ul style="list-style-type: none"> How much would those facilities cost? Will the investor be willing to pay for entire cost of project? If not, will the utility have the ability to either use extra capacity itself or sell it to other parties, and would that capacity usage be available immediately? The USoA gives the utility the ability to evaluate estimated costs based upon the actual cost of similar projects |
|  <p>Evaluating Requests for Service</p> <ul style="list-style-type: none"> Joint venture projects <ul style="list-style-type: none"> If utility is asked to partner with an entity, the use of a USoA both in the evaluation and operating stages will allow all parties to judge whether a proposal is a good investment and the success of such ventures by comparing estimates prepared using the USoA and the accumulation of actual costs using the same USoA | | |

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|  <p>NIGERIAN ELECTRICITY REGULATORY COMMISSION</p> <p>Uniform System of Accounts (USOA) for the Nigerian Electricity Supply Industry (NESI)</p> <p>Presented by: Abba Ibrahim Tarab Analyst, Financial & Accounts Analysis</p> <p>Accra, Ghana Tuesday, 3rd June 2014</p> | <p>Outline</p> <ul style="list-style-type: none"> • Background • Uniform System of Accounts • Development Process • Structure of the USOA • Principles of USOA • Reporting Requirements • Conclusion | <p>Background</p> <ul style="list-style-type: none"> • NERC is the statutory agency mandated to regulate and monitor the Nigerian Electricity Supply Industry (NESI). • Individuals and entities intending to engage in the business of electricity generation, transmission, system operations, distribution or trading are required to obtain operating license from the Commission |
| <p>Background</p> <ul style="list-style-type: none"> • The Licenses issued by the Commission include conditions requiring the maintenance of records, the provision of information and the separation of financial records between regulated and non-regulated activities. | <p>Background</p> <ul style="list-style-type: none"> • Rate regulated activities are considered to be unique from other general commercial activities due to: <ul style="list-style-type: none"> a) Regulatory objectives of: <ul style="list-style-type: none"> • setting 'just and reasonable rates' for consumers; • ensuring the financial viability of suppliers; and • protecting the availability and stability of supply | <p>Background</p> <ul style="list-style-type: none"> b) Rate balancing requirement for suppliers to either increase the selling price (rate) to recover 'allowable revenue', or lower the rate to eliminate 'excess' revenue; c) Rate changes usually apply prospectively and are often designed to 'smooth' the impact of rate changes for customers over time; d) Some specific assets and liabilities arise where a rate regulation regime exists (regulatory assets & liabilities or regulatory debit & credit balances). |
| <p>Uniform System of Accounts</p> <p>□ USOA is a regulatory tool designed to provide the necessary financial information about the regulated business for:</p> <ul style="list-style-type: none"> a) Tariff Determination/Review and other regulatory decisions that requires financial information | <p>Uniform System of Accounts</p> <ul style="list-style-type: none"> b) Monitoring of Financial Performance to safeguard against systematic failure c) Avoiding varied interpretations between companies of definitions and reporting requirements d) Improving robustness and consistency of reported data | <p>Uniform System of Accounts</p> <ul style="list-style-type: none"> e) Detection of certain anti-competitive behaviour such as cross - subsidisation and undue discrimination f) Comparative competition and monitoring the financial health of the licensed utilities g) Improving transparency in the regulatory process |
| <p>Development Process</p> <ul style="list-style-type: none"> □ The Commission in collaboration with the NASB (now FRC) began the process of developing accounting standards for the NESI in 2008. □ Following the adoption of IFRS, emphasis shifted to regulatory reporting framework | <p>Development Process</p> <ul style="list-style-type: none"> □ Various regulatory reporting frameworks were considered □ US's FERC 2009 version of USOA was adapted □ Stakeholders consultation workshops held | <p>Development Process</p> <ul style="list-style-type: none"> □ Partnership with Michigan Public Service Commission (MPSC) through NARUC/USAID □ Reviews undertaken by Consultants' □ Industry Working Group (IWG) comprising representatives from GENCOs, TCN, DISCOs and NBET |

Development Process

- Exposure to Audit /Accounting Firms, Professional Accounting Bodies and licensed utilities;
- Comments received and reviewed.

Structure of USoA

- Definitions and Instructions
- Generation
- Transmission
- Distribution
- Trading
- Appendix – Regulatory Chart of Accounts

Structure of USoA

□ Numbering System – Seven (7) Digit whole numbers based on the following principles:

- Specific Sector of Operations in the NESI;
- Classification of Account Groups in line Financial Reporting format;
- Sub-grouping of related items/activities for ease of reference; and
- Listing of Accounts serially in the applicable sub-groups

Structure of USoA

| 1000000 | Generation |
|-------------------|--------------------------------------|
| 1100000 - 1199999 | Non Current Assets - Generation |
| 1200000 - 1299999 | Current Assets - Generation |
| 1300000 - 1399999 | Current Liability - Generation |
| 1400000 - 1499999 | Non Current Liabilities - Generation |
| 1500000 - 1599999 | Equity Accounts - Generation |
| 1600000 - 1699999 | Income/Revenue Accts - Generation |
| 1700000 - 1799999 | Expenses Accounts - Generation |
| 1800000 - 1899999 | Taxation Accounts - Generation |

Structure of USoA

| 2000000 | Transmission |
|-------------------|--|
| 2100000 - 2199999 | Non Current Assets - Transmission |
| 2200000 - 2299999 | Current Assets - Transmission |
| 2300000 - 2399999 | Current Liability - Transmission |
| 2400000 - 2499999 | Non Current Liabilities - Transmission |
| 2500000 - 2599999 | Equity Accounts - Transmission |
| 2600000 - 2699999 | Income Accounts - Transmission |
| 2700000 - 2799999 | Expenses Accounts - Transmission |
| 2800000 - 2899999 | Taxation Accounts - Transmission |

Structure of USoA

| 3000000 | Distribution |
|-------------------|--|
| 3100000 - 3199999 | Non Current Assets - Distribution |
| 3200000 - 3299999 | Current Assets - Distribution |
| 3300000 - 3399999 | Current Liability - Distribution |
| 3400000 - 3499999 | Non Current Liabilities - Distribution |
| 3500000 - 3599999 | Equity Accounts - Distribution |
| 3600000 - 3699999 | Income/Revenue Accts - Distribution |
| 3700000 - 3799999 | Expenses Accounts - Distribution |
| 3800000 - 3899999 | Taxation Accounts - Distribution |

Structure of USoA

| 4000000 | Trading |
|-------------------|-----------------------------------|
| 4100000 - 4199999 | Non Current Assets - Trading |
| 4200000 - 4299999 | Current Assets - Trading |
| 4300000 - 4399999 | Current Liability - Trading |
| 4400000 - 4499999 | Non Current Liabilities - Trading |
| 4500000 - 4599999 | Equity Accounts - Trading |
| 4600000 - 4699999 | Income/Revenue Accounts - Trading |
| 4700000 - 4799999 | Expenses Accounts - Trading |
| 4800000 - 4899999 | Taxation Accounts - Trading |

Principles of USoA

- **Completeness** – To provide consistent and reliable information to NERC
- **Flexibility** – Provide a platform that can change as required

Principles of USoA

- **Uniformity** – Mostly in accordance with the IFRSs where it does not conflict with regulatory objective
- **Transparency** – Developed jointly by NERC, Licensed Utilities and Consultants

Reporting Requirements

- All licensed utilities are required to file annually:
- IFRS based audited Financial Statements
- Balance Sheet and Profit and Loss Statement in line with USoA

Conclusion

- USoA enhances transparency about the rate-regulated environment and how it impacts the amounts, timing and certainty of entities' future cash flows;
- Availability of detailed information would enable users to measure correlation between actual and allowed earnings

Conclusion

- Enhances relationship between the regulator and the entities, including entities' historical experience in recovery of costs and earning the return allowed by the regulator

Conclusion

- Implementation of USoA is one of the surest ways to reduce information asymmetry and to improve the quality of the regulation

THANK YOU

Contact us at:
 Ademewa Plaza, Plot 1099 First Avenue,
 Off Shehu Shagari Way,
 Central Business District,
 Abuja

Website: www.nercng.org
 E-mail: info@nercng.org

Appendix C: Transition to USoA in Africa

East African Regulators Finalize Regulatory Accounting Tools



As they work to attract critical investment into the region, [East African nations are implementing policies and tools to build a financially sustainable electricity sector](#). Officials in [Rwanda](#), for instance, have plans to phase out direct subsidies to the state-owned utility and to build increased electricity interconnections with its neighbors on a path toward a regional market.

With the support of the United States Agency for International Development and Power Africa, regulatory officials in Rwanda recently joined colleagues from [Tanzania](#), [Ethiopia](#), [Kenya](#), and [Uganda](#) in taking a big step in that direction. Regulators joined the to finalize a regionally harmonized Uniform System of Accounts and a financial data collection template, tools that will help the countries unlock the energy potential of the region.

Regulatory Accounting Tools Yield Optimism

[The countries have been working together since 2014 on regulatory accounting in partnership with the National Association of Regulatory Utility Commissioners \(NARUC\)](#), which brings to bear over 100 years of regulatory expertise to support regulators in East Africa and around the world. Regulators in East Africa agreed on the need to develop a regionally aligned USoA, which will help support progress toward cost-reflective tariffs and increased generation and access.

“With enhanced regional power connections, the USoA will be a perfect instrument that will assist stakeholders as they undertake comparative analysis of utilities’ performance, both locally and regionally.”

~Robert Mahenia Githinji, Senior Manager of Legal Affairs, Kenya Energy Regulatory Commission

Now that these tools are finalized, officials are optimistic that their implementation will positively impact the region’s electricity sectors.

“I am confident that the USoA will benefit our countries and our regulatory body,” said Ali Rudahunga, a market analysis officer at the Rwanda Utilities Regulatory Agency (RURA).

A Path to More Private Capital

Once fully implemented, the USoA and data collection template will streamline transactions and connections as well as enable further private investment. The tools will also help to promote cross-border trade by creating clarity in the pricing information that underpins transmission and wheeling agreements.

Given that national regulators are now building their USoAs off the regional version, regulators will be well positioned to resolve disputes more easily over power and transmission pricing and support proper cost allocation of transmission lines and other regional assets.

“With enhanced regional power connections, the USoA will be a perfect instrument that will assist stakeholders as they undertake comparative analysis of utilities’ performance, both locally and regionally,” said Robert Mahenia Githinji, Senior Manager of Legal Affairs at the Kenya Energy Regulatory Commission. “The USoA will enhance transparency and accountability in the tariff review process.”

About Uniform Systems of Accounts

The USoA allows a regulator to properly identify and allocate costs associated with the generation, transmission and distribution of power. The tool ensures that the regulator can do an apples-to-apples comparison of costs between utilities, both within the country and across borders. It also provides an accurate understanding of the true cost of power to regulators and stakeholders, which overall can help drive progress toward cost-reflective

Timely Assistance from NARUC and USAID

At an August 2016 activity in Kigali, Rwanda, representatives from the region’s regulators praised NARUC and USAID’s training and technical assistance support on the USoA and template. Vianney Mutyaba, a Principal Financial Analyst at the Uganda Electricity Regulatory Authority, said that NARUC’s assistance helped regulators not only better understand the USoA but also articulate its need to other stakeholders.

“The help that NARUC provided was timely on our side,” Mutyaba said.

Regulators also discussed how it would improve their individual abilities to set rates accurately, which supports not only cost-reflective tariffs but also a more efficient regulatory process at the commissions.

“Now we can streamline the process of collecting data and setting rates going forward,” said Jean Pierre Kabango, Revenue Assurance Officer at RURA.

Looking ahead, regulators discussed next steps on their path toward a regional market, including harmonizing approaches to transmission and wheeling tariffs, updating grid codes and market rules, and continuing to build regulatory capacity. NARUC stands ready to continue its assistance to the region in line with the goals and priorities of each country as well as USAID and Power Africa.

This story is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of NARUC and do not necessarily reflect the views of USAID or the United States Government.

Appendix D

Implementation Plan of BC Hydro (Canada)

Full document at https://www.bcuc.com/Documents/Proceedings/2011/DOC_27251_A2-4_BCH-Action-Plan-Implement-USoA.pdf

2.1 Implementation of the Uniform System of Accounts

Figure 1 on the following page identifies the key tasks and milestones to enable BC Hydro to meet the requirement of implementing the USoA. Further details for each task are described below.

Task 1. Analyze and develop the BCUC USoA requirements and harmonization approach.

This task will involve the comparison of the BCUC USoA, including the accounting policies embedded within the BCUC USoA, with the current accounting policies currently used by BC Hydro under Canadian GAAP. This task will also involve anticipating the likely changes to occur as part of the transition to IFRS and its impact on the BCUC USoA. Upon completion of this task BC Hydro should be in a position to determine the proposals for updates to the current BCUC USoA for items that would benefit from transparency of information and harmonization to IFRS.

The development of the BC Hydro Code of Accounts has to align with the overall FSR Project timelines as it is one of the key input requirements to the SAP Design. The target date for the draft version of the BC Hydro Code of Accounts that will be incorporated into the SAP Design is the end of July 2009.

Task 2. Provide proposals for updates to and exemptions from the BCUC USoA to the BCUC staff.

BC Hydro will provide proposals for updates to and may provide proposals for exemptions from the USoA to the BCUC staff, and proposes to work with BCUC staff in advancing these. The exact timing will be determined as BC Hydro develops its detailed implementation plan.

Task 3. Establish a detailed implementation plan.

A detailed implementation plan is being developed that further breaks the tasks into activities with detailed timelines and individual accountabilities to ensure key milestones are met.

Task 4. Determine an approach for conversion of fixed assets.

BCUC Directive No. 54 instructs BC Hydro to ensure that plant additions commencing as of the date of the F09/F10 RRA Decision have the ability to be recorded and reported to the appropriate BCUC USoA account codes. BC Hydro will therefore need to develop a mapping process between its current account codes for capital additions and those in the BCUC USoA, for the transition period between now and when BC Hydro has fully implemented the BCUC USoA within its new SAP financial system.

Task 5. Conversion of the F2011 Budget to BCUC USoA.

BC Hydro will establish conversion requirements and a methodology to support the future RRA filings (after F2011) as specified under Directive No. 57, including comparatives for F2011. The forecast budget included in the F2011 RRA will still be based on the current management reporting. However, commencing April 1, 2010 actual information in SAP will be captured supporting new reporting requirements under the BCUC USoA and IFRS. The purpose of converting the F2011 budget is to

align the budget with the F2011 actuals in SAP, but additional budget information will be required to facilitate the conversion to the BCUC USoA or IFRS alignment. BC Hydro is not planning any conversion of historical information for periods prior to F2011 to SAP as the historic data does not include all the detail necessary to allow for conversion and alignment with the USoA and IFRS. Attempting to convert historical data would be a complex administratively intensive process that would not necessarily result in comparable data that could be explained.

Task 6. Monitor actuals.

After SAP implementation the capture of actual data will be monitored closely to ensure that users are following the new guidelines and procedures. The reporting on actual financial results will also be monitored to ensure alignment with the BCUC USoA and IFRS.

Task 7. Annual Progress Report to BCUC.

This task is described below in section 3.

2.2 Annual Financial Report to the BCUC.

Figure 2 on the following page shows the timeline and milestones for the development of BC Hydro's Annual Financial Report to the BCUC that incorporates the USoA. The key milestone for developing and implementing the new Annual Financial Report to the BCUC is the filing of the F2011 Annual Financial Report in July 2011. Further details for each task are described below.

Task 1. Draft format of financial schedules for SAP Design

The draft financial schedules to support regulatory filings will be developed to meet the timelines for SAP Design. These draft financial schedules will be used as input for the design of the Annual Financial Report to the BCUC. The draft schedules will be updated and modified as part of the F2011 RRA process.

Task 2. Annual Progress Report to the BCUC

This task is described below in section 3.

Task 3. Develop F2011 Annual Financial Report to the BCUC

Compiling the F2011 annual report will be a complex process as the actuals in SAP will be captured under the new design, while the F2011 RRA financial information will be on the current basis (Le., adjusted Canadian GAAP). In July 2011 BC Hydro will file the F2011 Annual Financial Report to the BCUC, which will conform to the BCUC USoA for actual results. BC Hydro is assessing how it will convert the F2011 RRA budget, which will be filed under the existing format, to the new format.

3. Annual Progress Reporting

BC Hydro is required to provide annual progress reports until the BCUC USoA is fully implemented. BC Hydro proposes to file the first progress report as part of the Annual Financial Report to the BCUC for F201 O. BC Hydro will work with the BCUC staff to ensure this proposed timing is acceptable.

The progress report will include a status update on the tasks (as detailed in sections 2.1 and 2.2) completed and the ability to meet the expected milestones. Other items which may be included are further updates that may be necessary to the BCUC USoA to align with the newest IFRS accounting policies, proposed new classifications that may be required to align with current business environments, historical plant accounts that do not align with the current BCUC USoA code, and other relevant matters.

*For questions regarding this publication, please contact:
Erin Hammel (ehammel@naruc.org),
Bevan Flansburg (bflansburg@naruc.org), or
Hisham Choueiki (hchoueiki@naruc.org)*

National Association of Regulatory Utility Commissioners (NARUC)

1101 Vermont Ave, NW, Suite 200

Washington, DC 20005 USA

Tel: +1-202-898-2200

www.naruc.org