

TACOMA PUBLIC UTILITIES
CLICK! COST ALLOCATION
CONSULTATION

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MOSS-ADAMS_{LLP}

Certified Public Accountants | Business Consultants

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I. EXECUTIVE SUMMARY

A consultant retained by Tacoma Public Utilities (TPU), Moss Adams performed an assessment of TPU's method of allocating the telecommunications capital investment and operating expenses between electric and Click! commercial applications. As part of this engagement, Moss Adams reviewed the methodology described in the 2013 Click! allocation change draft document dated March 18, 2013 (2013 draft), and gained an understanding of the recommended changes made to the allocation from the 2003 study.

Subsequent to our procedures, TPU updated the 2013 draft based on our recommendations. Our analysis was provided on the 2013 draft, however, our conclusions below are provided on the 2015 memo that includes our recommendations.

The consultation focused on the rationale used in determining the allocation methods and inputs used for the calculation of these allocation rates. It is our understanding that Management's objective for the updated cost allocation study is to provide a methodology that is reflective of the actual costs attributed to the electric and commercial applications of TPU.

The consultation was completed under the consultancy standards of the American Institute of Certified Public Accountants (AICPA). As such, this work does not constitute an audit or examination. Moss Adams assessed TPU's method of allocating the capital investment and operating expenses of Click! Networks between electric and Click! Network commercial applications, but did not test the operational factors or financial figures used in calculating the allocation percentages. This information was provided by Tacoma Power staff.

The 2015 memo outlines an updated proposed methodology to be used in determining the allocation of telecommunications capital investment and operating expenses between Electric and Click! commercial applications. The overall conclusion of this consultation is that this methodology as applied is consistent with current uses of the telecommunications network.

II. SCOPE AND METHODOLOGY

The scope of our consultation included the 2013 draft, and the subsequent 2015 Click! allocation update memo dated May 12, 2015 (2015 memo).

The methodology that Moss Adams followed to address the scope of work included interviews with staff and management within the Electric and Click! divisions of Tacoma Power. We also obtained written correspondence and supporting documentation from various employees of these divisions.

Recommendations were determined based on these initial procedures.

III. BACKGROUND

The City of Tacoma, Department of Public Utilities is comprised of three operating divisions: Power, Water, and Rail. Within the Power Division (also known as Tacoma Power) there are multiple sections including: Transmission and Distribution, Generation, Power Management, Rates, Planning and Analysis, Utilities Technology Services, and Telecommunications. The Transmission and Distribution section (Electric) is responsible for the reliable transmission and distribution of electrical services. The telecommunications section (also known as Click! Network or Click!) is responsible for the sale of cable television, internet, and data transport services to the public (commercial applications).

In 2000, Tacoma Power contracted PriceWaterhouseCoopers to conduct a review of the performance of the Click! network. To enable policy makers to judge the performance of the individual Click! and Electric portions of the Power Division, one of the recommendations from this review was that Click! separate its capital and operating costs into Commercial (i.e., Click!) and Power (i.e., Tacoma Power) service categories.

As a result of this recommendation, on August 26, 2002, the Tacoma Power Telecommunications Manager (Click! Network Manager), outlined a methodology to determine Capital Investments and Allocations of Operating Expenses.

“To allocate total capital investment and estimate depreciation for the two business categories, each of the thirty-two Telecommunications Project work orders were evaluated to determine their commercial and power related portions. The team asked itself “Would these investments have been made if Tacoma Power was not offering Cable TV, Internet or other commercial broadband services?” If the answer was no, the investment costs were allocated to Commercial Applications.”

Based on this test, Tacoma Power staff determined that approximately 27.4%/72.6% of the total \$85.8 million initial investment in Telecommunications assets should be allocated to Electric/Click!, respectively, and on a prospective basis, all capital projects would be assigned directly to either Electric or Click! depending on whether the project pertained to the capital infrastructure leading up to the customer meter/drop (Electric) or included work within the customer premises (Click!). In addition to this capital split, a determination was made to allocate future operating expenses either 100% to either Electric or Click! Network, respectively, or 50% to each.

In 2002, Tacoma Power contracted Virchow Krause and Company to perform a study assessing the reasonableness of this allocation rate. This study, dated July 23, 2003, determined that the allocation method determined by the Division was reasonable at that time. Since that date, the Division has maintained this same methodology and allocation for financial reporting. Since 2013 TPU has been using the updated allocation methodology for strategic planning.

In 2012, the Division determined a need to re-evaluate the allocation of the plant and associated costs, as well as the methodology behind it. The main driver of this re-evaluation was the differences between the predicted and actual usage of the system over the 10 years since the 2002 study. At the time of the

initial study, the Division had planned on installing an extensive Advanced Metering Infrastructure (AMI) metering network, which required physical fiber to the meter. In the 10 years since, it has been determined that the physically networked AMI meters are not a feasible solution to the Division's long term metering requirements. The Division is currently in the process of assessing alternative metering solutions and although a final decision has not yet been made, it has been determined that because meter vendors have moved to wireless technology, the remaining options will not require physical connection, thus changing one of the premises of the original study.

With this change, the Division conducted an internal study reviewing the original allocation assigned to each individually included cost center, using actual costs from the 2012 year, and has documented this assessment in the 2013 memo. Our procedures detailed in this report have been performed on the information detailed in this memo.

IV. 2013 DIVISION RECOMMENDATIONS AND MOSS ADAMS ASSESSMENT

Capital asset ownership:

2013 Division Recommendation: Tacoma Power should “own” all of the Hybrid Fiber Coaxial (HFC) plant shared between Electric and Click! up to the customer meter (drop). Assets on the customer side of the meter used to deliver Click! service should be owned and funded by Click!.

Procedures Performed: The initial infrastructure was constructed primarily to support the needs of the Power Division’s communication and SCADA services. This infrastructure was financed by the Electric portion of the Power Division. Failures to the majority of this infrastructure, particularly the fiber and service rings, would affect the reliability of Power services.

Analysis: Because the Electric portion of the Power Division financed the asset and because the asset was constructed to support the Electric portion of the Power Division, there is support for ownership of this capital asset remain with the Electric portion of the Power Division. This conclusion is limited to the HFC portion of the grid. With the exception of the remaining 16,000 AMI meters in place owned by the Electric portion of the Power division, all assets from the drop site through the service premises are related to Click!. These include items such as cable modems, optical receivers, amplifiers, set-top boxes, testing equipment, Hub Electronics, and other assets that are used specifically for cable access. Because they are used solely for Click! services, similarly, there is support for these capital assets would be “owned” by the Click! portion of the Power division.

Depreciation:

2013 Division Recommendation: Click! should not include depreciation expense on any of the Hybrid Fiber Coaxial (HFC) network; all HFC depreciation should be accounted for by the Electric portion of the Power Division. Click! should only track depreciation on assets such as cable modems, optical receivers, amplifiers, set-top boxes, testing equipment, Hub Electronics, and other assets used solely for serving Click! customers.

Procedures Performed: Depreciation on assets should be expensed to Electric of Click!, depending on which owns the asset being depreciated. Thus all depreciation on HFC assets should be charged to the Electric portion of the Power Division and all depreciation on assets from the drop site through the service premises should be charged to Click!.

Analysis: Because it is recommended above that the Electric portion of the Power Division retain ownership of all HFC capital infrastructure, there is support for depreciation associated with these assets to also be charged to the Electric portion of the Power Division. Using this same

methodology, similarly, there is support that all depreciation on Click! assets as described above be charged to Click!.

Data Conduit Requirements:

2013 Division Recommendation: Tacoma Power should review the future need for Data Conduit Requirements that is included in the Customer Requirements for Commercial Secondary Service. Data Requirements state that the data conduit system shall be installed wherever electrical power conduits are being installed. The data conduit requirements were established when a full AMI roll-out to the service territory was expected.

Procedures Performed: Installation of a data conduit system wherever electrical power conduits are installed is no longer required. The Division has terminated the contract to service AMI meters and is phasing them out. The Division is exploring alternative metering solutions to ensure that all future metering needs can be met; however, with the changes in technology, all front runners in this search do not require a physical cable connection, thus making the majority of this data conduit unnecessary for Electric purposes.

Analysis: Because the Division is no longer planning a large-scale roll-out of wired AMI meters due to meter technology going wireless and the AMI project being discontinued, there is support to remove the requirement to install data conduit wherever electric power conduits are installed. This does not affect the allocation calculation because individual capital work orders were previously created for each of the Electric and Click! portions of this construction and accounted for in the respective areas.

Usage Fee:

2013 Division Recommendation: Click! should be charged a usage fee similar to a lease or rent for use of the HFC Network. Historically, Click! has been charged an allocated percentage of fees based on the initial 2002 study, which recommended an arbitrary 50%/50% or 100% dependent on cost center. The Division recommends that prospectively Click! be charged a “usage fee” equal to the maintenance fees associated with the proportion of cable used by Click!. In addition, Click! should bear the full cost of other O&M expenses supporting the delivery of Click! services.

Procedures Performed: See 2013 proposed allocation rates below:

Cost Center	Description	Allocation Factor Summary				Projected 2013/2014 Expenses					
		Old		New		Old Allocation		New Allocation		Difference	
		Click!	Electric	Click!	Electric	Click!	Electric	Click!	Electric	Click!	Electric
HFC Network Support											
555300	Click Network Oper	0%	100%	56%	44%	\$ -	\$ 2,965,634	\$ 1,673,646	\$ 1,291,988	\$ 1,673,646	\$ (1,673,646)
562700	PwrT&D HFC NtwrkCns	0%	100%	56%	44%	\$ -	\$ 1,607,885	\$ 907,405	\$ 700,480	\$ 907,405	\$ (907,405)
562800	PwrT&D HFC NtwrkEng	0%	100%	56%	44%	\$ -	\$ 516,393	\$ 291,424	\$ 224,968	\$ 291,424	\$ (291,425)
Customer Installation Support											
553500	Click Svc Install	50%	50%	100%	0%	\$ 2,769,997	\$ 2,769,997	\$ 5,539,994	\$ -	\$ 2,769,997	\$ (2,769,997)
553200	Click Tech Op Admin	50%	50%	86%	14%	\$ 343,805	\$ 343,805	\$ 590,753	\$ 96,857	\$ 246,948	\$ (246,948)
553600	Click Dispatch	100%	0%	100%	0%	\$ 983,500	\$ -	\$ 983,500	\$ -	\$ -	\$ -
Network Services											
555400	Click Broadband Svcs	50%	50%	99%	1%	\$ 1,222,868	\$ 1,222,868	\$ 2,421,278	\$ 24,457	\$ 1,198,410	\$ (1,198,411)
555500	Click Ntwk Engineering	0%	100%	95%	5%	\$ -	\$ 1,350,400	\$ 1,282,880	\$ 67,520	\$ 1,282,880	\$ (1,282,880)
555600	Click Net Svc Assur	0%	100%	95%	5%	\$ -	\$ 1,899,167	\$ 1,804,208	\$ 94,959	\$ 1,804,208	\$ (1,804,208)
Admin/IT Costs											
551100	Click Admin	50%	50%	95%	5%	\$ 1,409,103	\$ 1,739,328	\$ 3,005,113	\$ 143,318	\$ 1,596,010	\$ (1,596,010)
552200	Alick Mkt Admin	100%	0%	100%	0%	\$ 2,433,826	\$ -	\$ 2,433,826	\$ -	\$ -	\$ -
552100	Click MrktBusOpsAdm	100%	0%	100%	0%	\$ 399,491	\$ -	\$ 399,491	\$ -	\$ -	\$ -
552600	Click Busns Sys	50%	50%	100%	0%	\$ 888,323	\$ 888,323	\$ 1,776,647	\$ -	\$ 888,324	\$ (888,323)
Other (Unchanged)											
552300	Click Marketing Svc	100%	0%	100%	0%	\$ 31,466,262	\$ -	\$ 31,466,262	\$ -	\$ -	\$ -
552400	Click ISP Adv	100%	0%	100%	0%	\$ 524,000	\$ -	\$ 524,000	\$ -	\$ -	\$ -
552500	Click Cust Sales	100%	0%	100%	0%	\$ 2,850,440	\$ -	\$ 2,850,440	\$ -	\$ -	\$ -
553700	Click Converter Inv	100%	0%	100%	0%	\$ 913,340	\$ -	\$ 913,340	\$ -	\$ -	\$ -
		75%	25%	96%	4%	\$ 46,204,955	\$ 15,303,800	\$ 58,864,207	\$ 2,644,547	\$ 12,659,252	\$ (12,659,253)

On review of the allocation methodology as detailed in the original 2013 draft recommendations, we have determined the following:

HFC Network support:

These cost centers effectively maintain the operations of the HFC plant, which include engineering, design, conversion work, safety equipment, repairs, operating supplies, etc. to keep both the Fiber and Coax assets running as intended. Historically, costs associated with the cost centers held under this umbrella have been allocated 100% to the Electric portion of the Division. In 2013, the Division updated the methodology used to determine this allocation and, instead of allocating 100% of these costs to Electric, used total miles of fiber and coax, as well as total customer counts of each type to determine a 56%/44% allocation as documented above. Because the use of the actual infrastructure at that time was not solely for the purpose of Electric support, we have determined that this method of allocating costs to be supportable. **However, because there have been changes in the actual respective use of cable used over time, in order to ensure relevance, we recommend that the figures used in the calculation be updated to the most recent available figures.**

Network Services - Click! Network Service Assurance:

Network Services - Click! Network Service Assurance cost center directly supports the servicing of the HFC Network. **As such, it was recommended that the proposed allocation percentage be reviewed for appropriateness.**

Customer Installation Support:

As a result of the 2013 procedures, it was determined that 100% of the costs of the Click! Service Install and Click! Dispatch cost centers should be allocated to Click!. **Because these cost centers also support the approximately 16,000 remaining AMI meters, it was recommended that an assessment be performed to determine whether this allocation was supportable.**

Analysis: With the exception of these recommendations, based on our interviews, there is support for all remaining cost center allocations.

V. DIVISION RESPONSE

In response to these recommendations, the Division has performed the following procedures:

HFC Network support:

In order to update the calculation, first the Division separated the costs for the fiber portion and coax portion of the assets based on miles of each.

	2013		2014	
Miles of Fiber	527	27%	382	21%
Miles of Coax	1,400	73%	1,426	79%
Total	1,927	100%	1,808	100%

To determine the allocation of the fiber portion of the cable, the total fiber count in each individual cable used for each the Electric portion of the Power Division and Click! was then counted and divided between the two. The total unused or “dark” fiber was assigned to the Electric portion of the Power division because this was who initially financed and constructed the asset and who maintains ownership of the capital asset. Because there is split usage of the asset, we have determined that there is support for the method of allocating this usage.

Fiber Allocation	2013 Calculation		2015 Calculation	
	Fiber Count	Percent	Fiber Count	Percent
TP - Click!	854	23%	869	23%
TP - Dark	1,904	50%	1,926	51%
TP - Tacoma Power used	434	11%	406	11%
TP - CityNet	594	16%	558	15%
Total	3,786	100%	3,759	100%

To determine the allocation of the coax portion of the cable infrastructure, a new methodology was determined. The initial 2002 study allocated all of these costs to Electric because it was expected that all end premises would be fit with a wired AMI meter. As discussed previously, this did not come to pass. The 2013 recommendations attempted to use customer counts; however, because many customers subscribed to multiple services, this, too, proved to be potentially inaccurate as customers who had multiple services (e.g., cable and internet or cable and AMI) were counted multiple times. The 2015 methodology is now, instead, based on total number of customer “drops” or connections to the main infrastructure. Using this methodology, any drop that included a customer meter was allocated to electric; all remaining drops were allocated to Click!. Because the drop for those premises using an AMI meter was specifically installed for the purpose of that meter, and because all drops that do not support a meter are used solely for the purpose of Click! services, we have determined that there is support for this allocation. We note, however, as Electric ceases to support the wired AMI meters that this allocation will change and thus recommend regular reassessment of this allocation.

Coax Allocation	Service Drops
Gateway - Power	16,889
Click!	24,296
Total	41,185

Network Services - Click! Network Service Assurance

Further, as the Network Services - Click! Network Service Assurance cost center directly supports the servicing of the HFC Network, it was also determined that the allocation of the cost of that support should follow the allocation of the asset it was supporting.

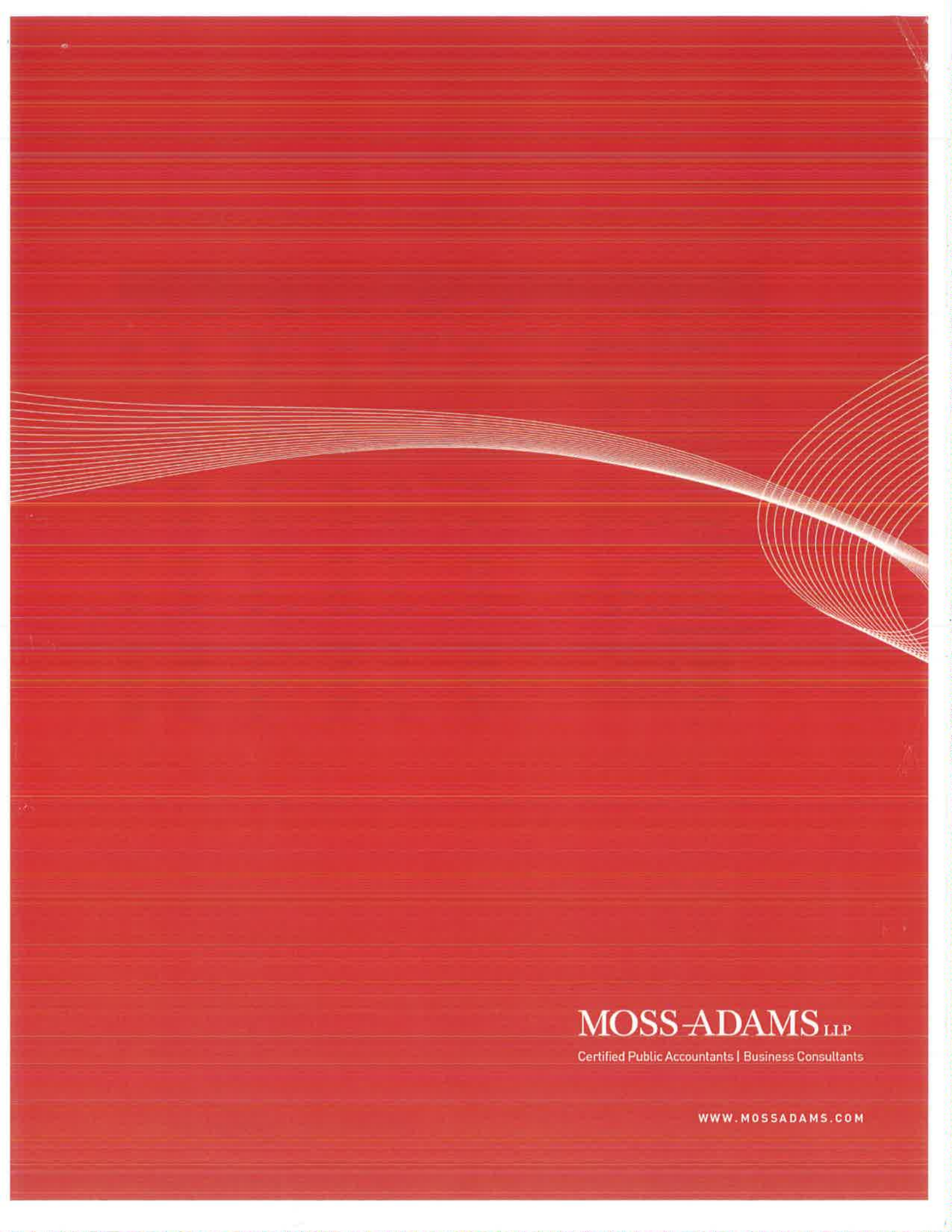
Customer Installation Support

Finally, because the Click! Service Install and Click! Dispatch cost centers currently support approximately 16,000 remaining AMI meters, an analysis of total time spent per work orders was performed for Service Install and total hours worked per position for Dispatch. Total time spent servicing AMI meters amounted to approximately 394 hours, or 2%, and total Dispatch time amounted to 3 of every 40 hours, or approximately 7%. As such, there is support for 2% and 7%, respectively, of these total costs be allocated to the Electric portion of the Power Division.

2015 Proposed Rates

Using these new figures, the Division has revised the 2013 draft recommendations as follows (included within the 2015 memo):

Cost Center	Description	Allocation Factor Summary					
		Current		2013 Proposed		2015 Proposed	
		Click!	Electric	Click!	Electric	Click!	Electric
HFC Network Support							
555300	Click Network Oper	0%	100%	56%	44%	51%	49%
562700	PwrT&D HFC NtwrkCns	0%	100%	56%	44%	51%	49%
562800	PwrT&D HFC NtwrkEng	0%	100%	56%	44%	51%	49%
Customer Installation Support							
553500	Click Svc Install	50%	50%	100%	0%	98%	2%
553200	Click Tech Op Admin	50%	50%	86%	14%	80%	20%
553600	Click Dispatch	100%	0%	100%	0%	93%	7%
Network Services							
555400	Click Broadband Svcs	50%	50%	99%	1%	99%	1%
555500	Click Ntwk Engineering	0%	100%	95%	5%	95%	5%
555600	Click Net Svc Assur	0%	100%	95%	5%	51%	49%
Admin/IT Costs							
551100	Click Admin	50%	50%	95%	5%	94%	6%
552200	Alick Mkt Admin	100%	0%	100%	0%	100%	0%
552100	Click MrktBusOpsAdm	100%	0%	100%	0%	100%	0%
552600	Click Busns Sys	50%	50%	100%	0%	100%	0%
Other (Unchanged)							
552300	Click Marketing Svc	100%	0%	100%	0%	100%	0%
552400	Click ISP Adv	100%	0%	100%	0%	100%	0%
552500	Click Cust Sales	100%	0%	100%	0%	100%	0%
553700	Click Converter Inv	100%	0%	100%	0%	100%	0%
		77%	23%	96%	4%	94%	6%



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