AN IN-DEPTH LOOK AT CLICK! FINANCIALS

May 20, 2015

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TACOMA PUBLIC UTILITIES

AGENDA

- Background and 1997 Telecommunications Study (Bob Mack)
- What has changed? (Bob Mack)
- Smart meter technology (Joe Tellez)
- Click! financials: Cost allocation (Bill Berry)
- Moss Adams, LLC review (Julie Desimone)
- Click!'s revenues do not cover its costs (Bill Berry)
- Summary (Chris Robinson)

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Section 1

Bob Mack

Deputy Director for Government Affairs

How Click! got its start, and how the 1997 telecommunications study used to launch Click! compares to actual growth

- Some objectives reached (competition, enhanced services). Others were not (# of cable customers, revenues, profits)
- Always anticipated Click! would recover its costs, including Click!'s share of original capital investment

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BACKGROUND

- By 1996, TCI was the only cable TV provider, with 36 channels
- No other viable provider of Internet or TV
- No viable provider of high-speed data service for Tacoma Power's (City Light) system control

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TACOMA'S IDENTIFIED NEEDS

- Cable TV competition, with upgraded system
- Broader and greater Internet service for businesses and residences (Frank Russell, et al.)
- Tacoma Power (City Light) system improvements and system control, reliability and efficiency
- Two-way communications with Power customers

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1997 TELECOMMUNICATIONS STUDY

- **Prepared by outside team, with TPU staff assistance**

- **Report included:**
  - Review of the telecommunications industry
  - Survey of other cities
  - Local communications business plan
  - "The Residential Market" - Market Data Research Corp.
  - "The Current Business Market" - Market data Research Corp.
  - "Future Market to Serve" - APEX Business Solutions
  - "Telecommunications and Economic Development" - Bruce Mann and Sue Heath
  - "Economic Development in the Greater Tacoma/Pierce County Area" - APEX Business Solutions Project Team

CUSTOMER RESEARCH - 1996

Residential customer survey - 606 households

- 78% of Tacoma households have cable TV
- 44% would pick Click! Cable TV – if options and prices were similar.
- More would switch if Click! Cable TV had more options and lower prices

Business and Internet Survey

- 200 businesses surveyed – 61% use Internet (limited access)
- 18% of households online

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1997 PUB/COUNCIL PRESENTATIONS

Identified benefits to "City Light"

- System "control and outage reporting"
- Performance "monitoring and preventive maintenance"
  - Cost estimate for the two items above - $15 million
- Interactive "communication link to customers"
- Better services than competitors
- High-speed, low-cost Internet
- Regional economic development
- Additional revenue to City Light and City

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IDENTIFIED RISK FACTORS

- "Fail to gain market share"
- Non-competitive product
- "Construction and O&M costs substantially exceed estimates"

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ORGANIZATION OF TELECOMMUNICATIONS UTILITY

"The Telecommunications Project … shall be an integral Light Division operating responsibility and function."

- City Light operates Click!
- ISPs solicited to provide Internet service

Financing

- After considering both bond issuances and Light Division investment, determination was to finance with Light Division advances
- "Expenses" list presented to Council included "Debt Service"
- "Pro Forma Income Statement" projected "Income Available for Plant Service, Debt Retirements" at $1.4 million for 1999-3rd year of operation ($14 million in 2015)

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CROSS-SUBSIDY ISSUES

- Project "shall be operated in a business-like manner…" (Council presentation)
  - Assumed net profit by 1998 – 2nd year of operation
- If operated "in a business like manner, the system would generate sufficient revenues to make the system self sustaining." (Council presentation)
- Only "customers who choose to buy" cable TV "would be charged for them. No tax money would be used and your electric rates would not increase because of this new system…" (Council presentation)

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ORIGINAL COST ESTIMATES

- June 1996: $45-55 million
- September 1997: $96 million
- October 1997: $99.4 million

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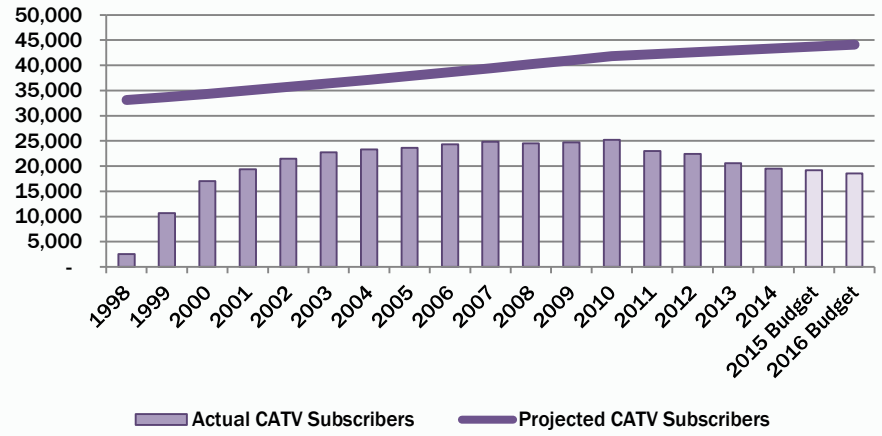
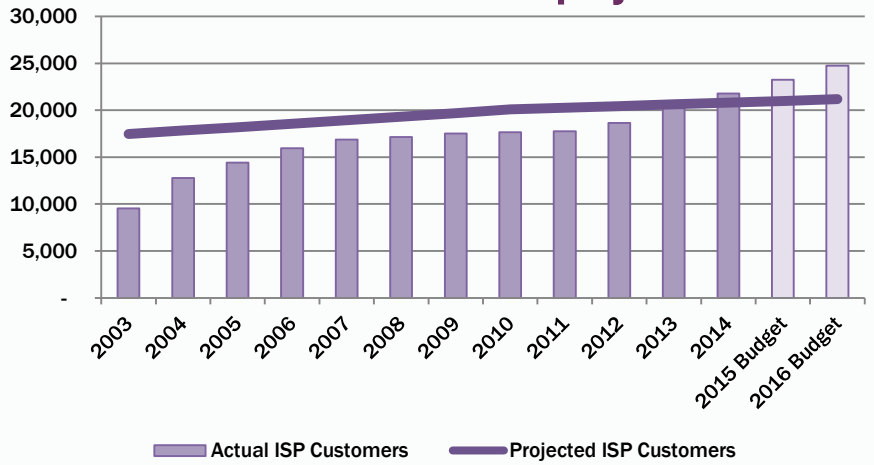
1997 PROJECTIONS VS. ACTUAL

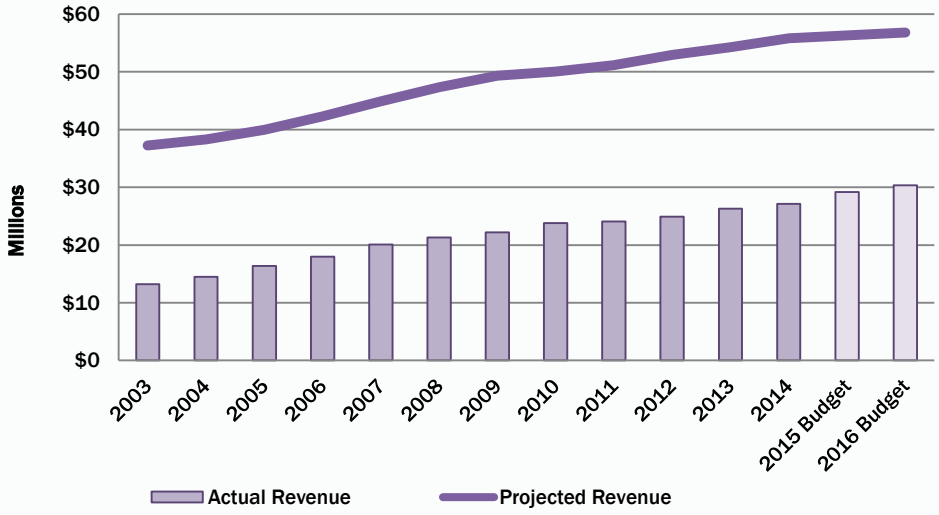
Fewer cable customers than projected



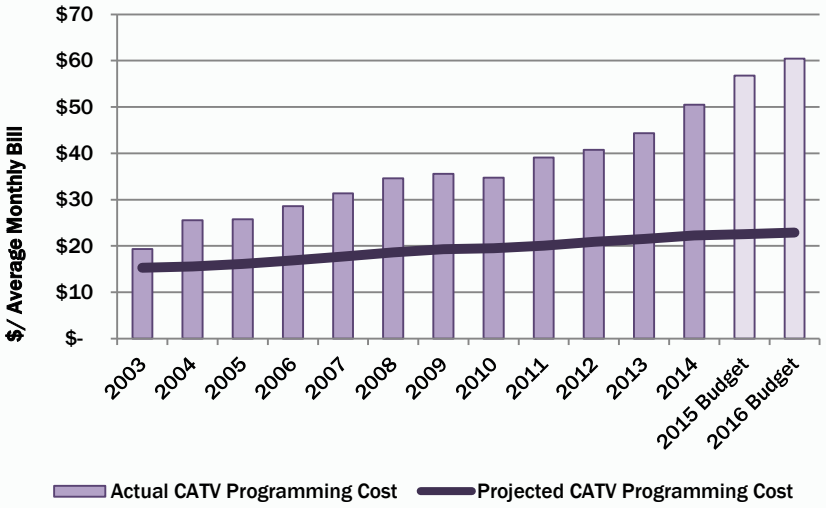
ISP customers vs. projected



Lower revenues than projected



Higher programming costs



- *The projections are from an appendix to the 1997 financial statements*
- *The 1997 projection brought to current dollar values using core CPI from the Bureau of Labor Statistics*

Section 2

Bob Mack

What has changed in 20 years?

- Did not anticipate decline in cable TV use
- Advent of broadband Internet, social media, mobile devices, over-the-top content amid rising cable costs have accelerated change
- Hybrid business model prevents Click! bundling and benefitting from margin on broadband Internet

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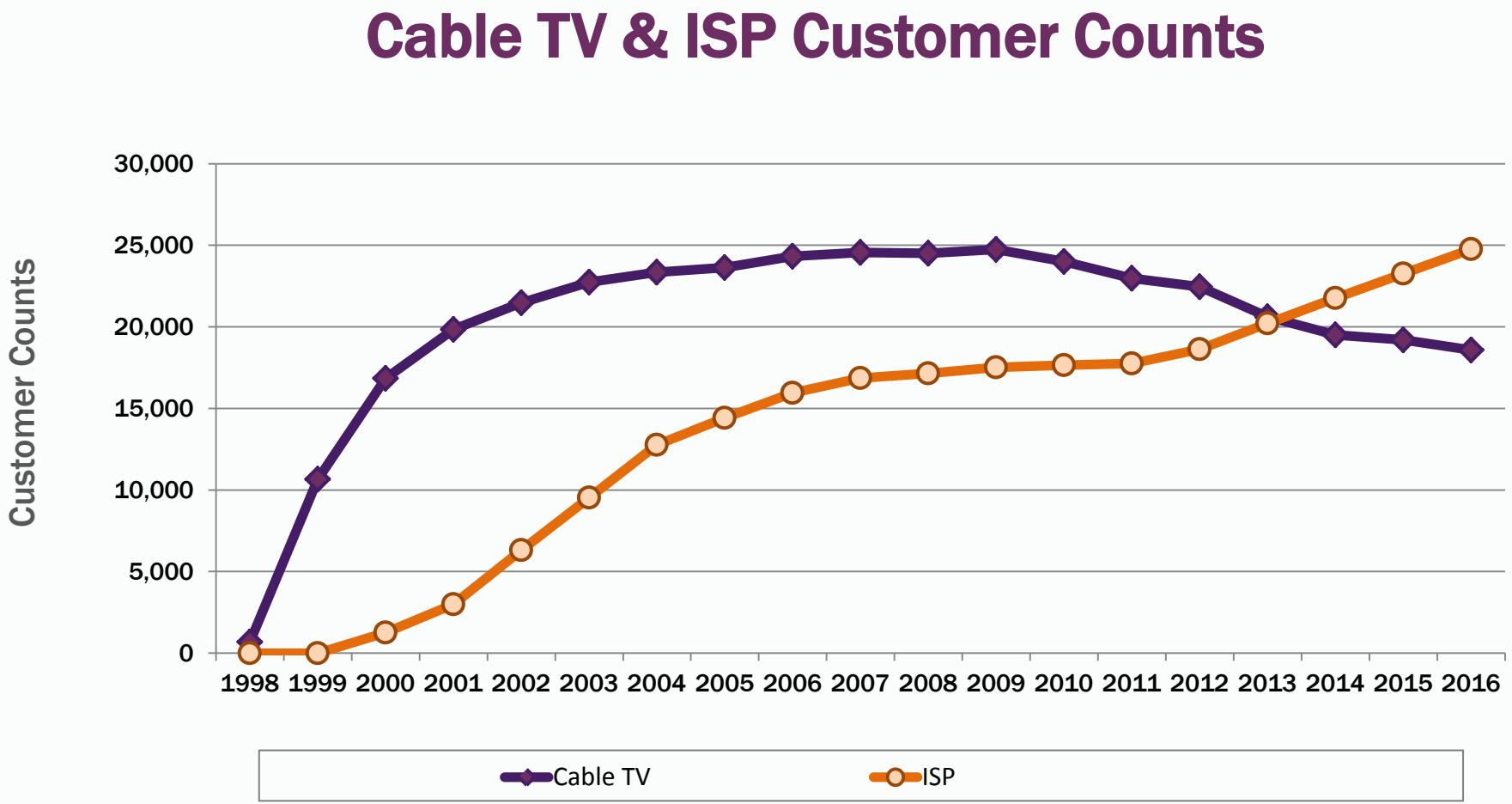
TELECOMMUNICATIONS GROWTH TRENDS 1998 TO 2016



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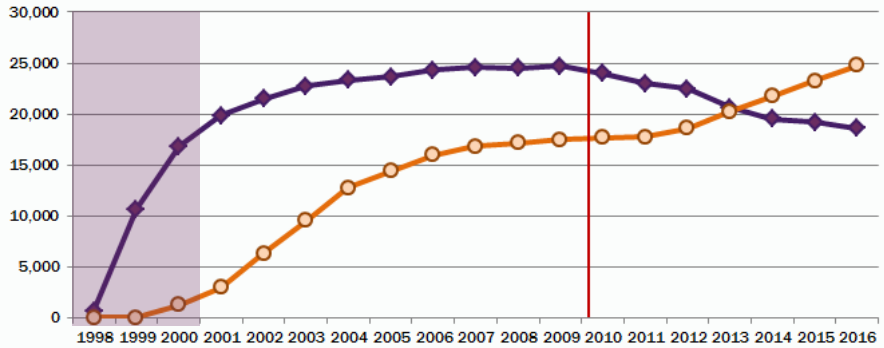
1998-2000: CABLE TV GROWTH MODE

Click! Cable TV introduced in 1998 to stimulate competition, improve cable & telecom services locally, and build foundation for smart grid

- Decision made to employ hybrid business model: Click! Cable TV and private Internet – no bundling
- Tacoma City Light believes cable to the home is the best way to establish the smart grid
- ISPs begin offering Internet to stimulate competition locally
- Roughly 36% of Americans report using the Internet in 1998 (Pew Research Center)
- Nearly 70% of U.S. household subscribe to cable TV (Nielson)



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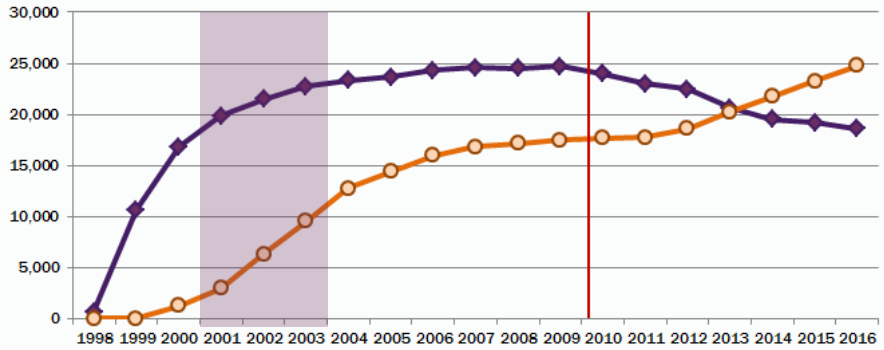
2001-2003: INTERNET, ISP GROWTH MODE

Both Click! Cable TV and ISP customer bases grow as Internet becomes mainstream

- August 2000 – 50% of people use Internet
- Broadband begins in 2000 with 3% adoption
- Dial-up access peaks in 2001 with 41% of Internet users



- By 2003, dial up in permanent decline as broadband grows
- Google becomes popular as a search engine
- Video on demand (VOD) & Digital Video Recorders (DVRs) introduced
- Industry first move to bundled packages

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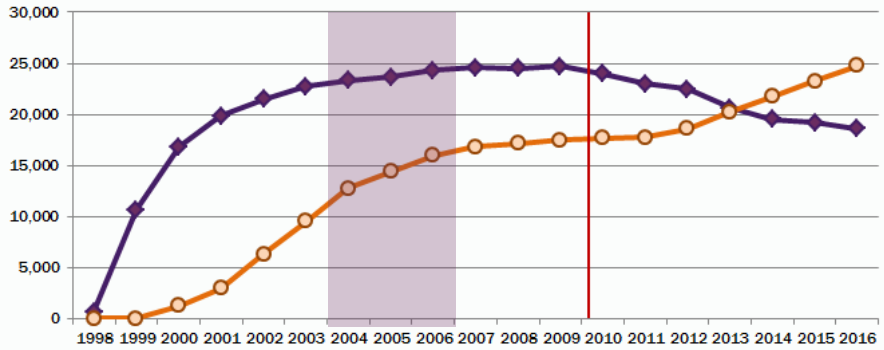
2004-2006: CABLE COMPETITION PROLIFERATES

Non-traditional competitors to cable TV enter market, demand for faster Internet grows

- By 2006, 73% of American adults use Internet
  - 42% use broadband; 23% dial up
- YouTube begins operations, online video use soars



- Facebook commercially available in 2006
- Satellite TV gains 29% share in the marketplace nationally
- Bundling options aggressively marketed - double & triple play
- Click! first pays retransmission consent fees in 2006

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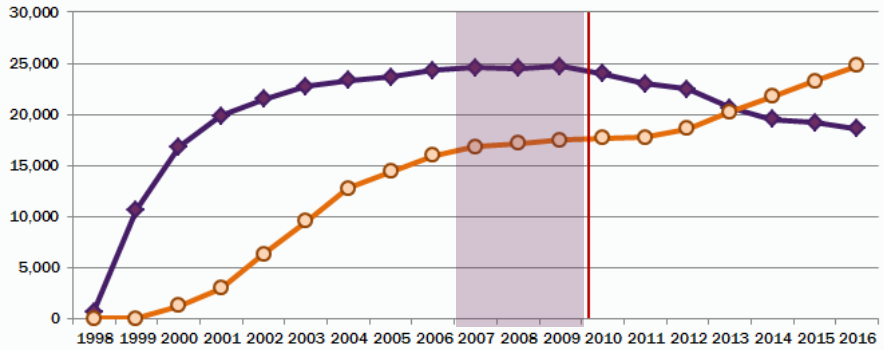
2007-2009: CABLE COSTS SOAR, BUNDLES BECOME NORM

New technology and birth of social media drive Internet adoption while Click! Cable TV costs increase

- Netflix introduces streaming video
- Hulu, Roku, and Amazon Prime Instant Video begin operations
- iPhone & Android smartphones introduced
- Pew Center reports more things connected to Internet than people on Earth
- Consumers begin to buy video content separately



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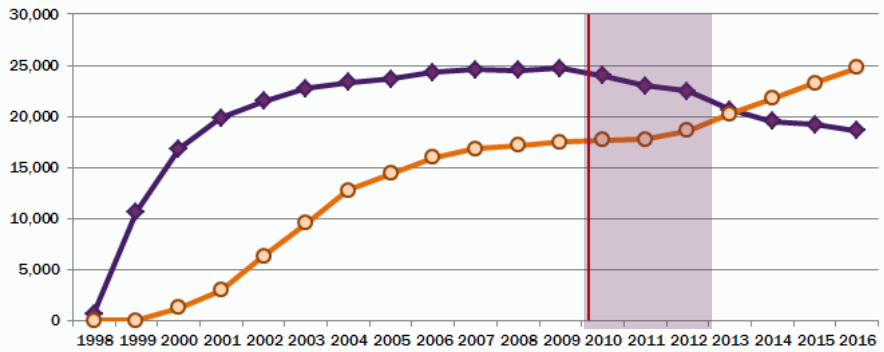
2010-2012: ALTERNATIVE FORMS OF STREAMING BECOME POPULAR

Consumer content consumption preferences change as streaming becomes mainstream, mobile devices proliferate and cable costs grow

- Cable TV continues cost increase amid poor economy, fueling “Cord Cutters” and “Cord Nevers”
- 2009 FCC digital TV switchover
- The tablet is first introduced
- Click! customer count begins downward trend as the ISP customer counts rise
- Click! Strategic Plan recognizes issues with two business models
- Build out of TPU network stops



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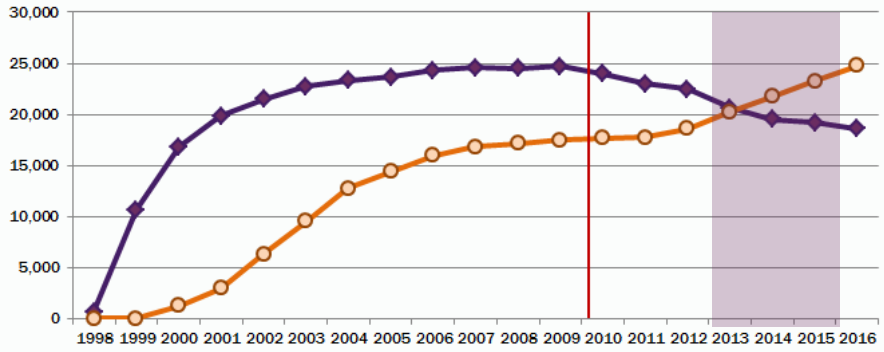
2013-2015: INTERNET ECLIPSES CABLE

Internet emerges as leader – both Click! and Comcast now experience more ISP customers than cable TV as cable costs continue to rise

- Click! retransmission consent fees grow over 825% since ’06; programming costs up 123% since ’03
- 87% of Americans report using the Internet; 70% of American adults have broadband at home
- 74% of American adults use social media
  - Facebook reports 1.44 billion active users
  - More video is uploaded to YouTube in 1 month than the 3 major U.S. networks created in 60 years
- 64% of American adults own a smartphone with Internet



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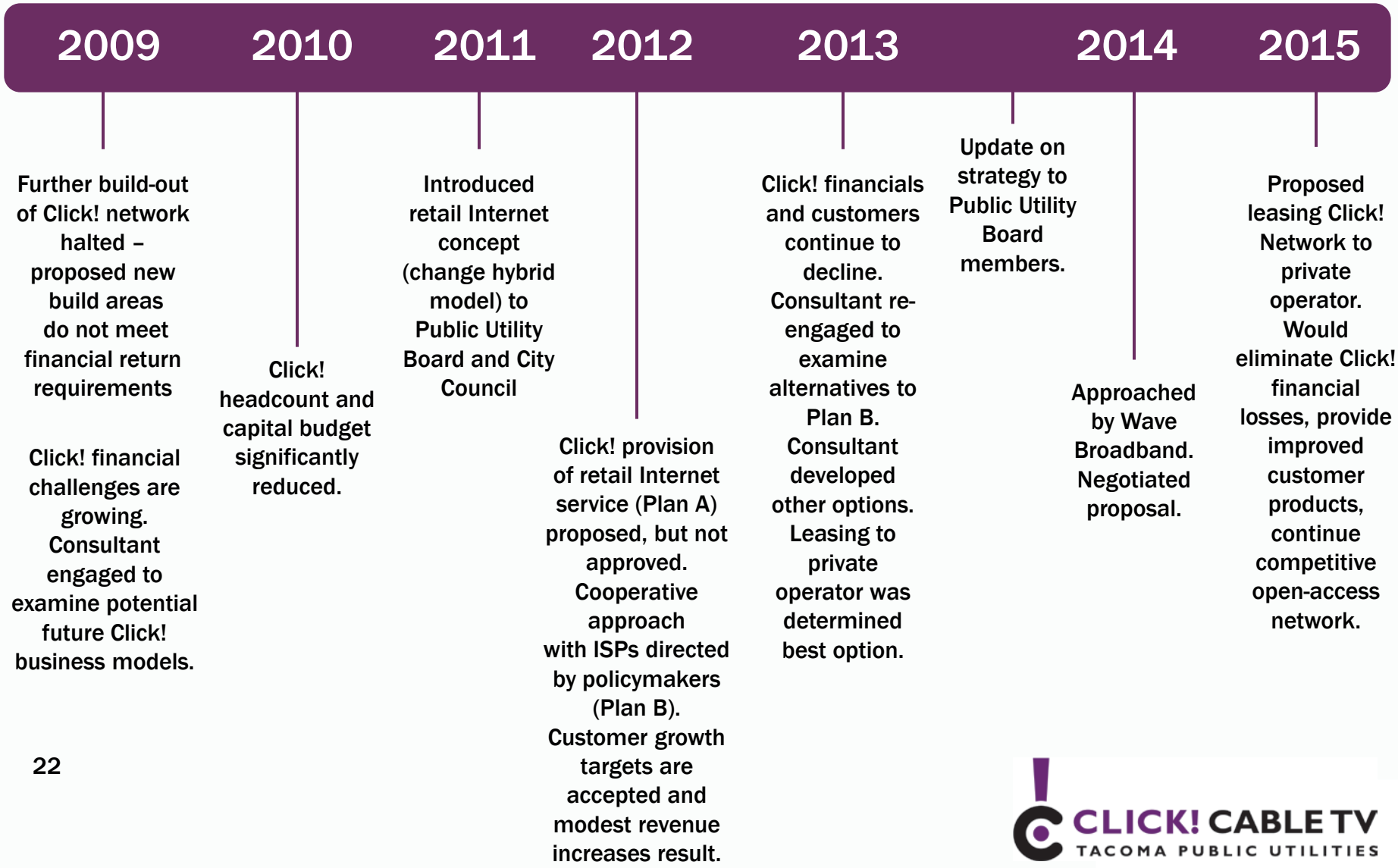
CLICK! MANAGEMENT TIMELINE



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SUMMARY

Original Click! business plan vs. current situation

- Proved to be overly optimistic in terms of network build-out costs, programming costs, market share, revenues
- Assumed recovery of all related costs, including Click!'s share of the original capital investment
- Did not foresee the industry evolution to wireless power metering systems
- Did/could not foresee the significant increase in broadband internet utilization, and decline in cable television utilization
- "Hybrid" model involving private ISPs prevents product "bundling" to match competition
- "Hybrid" model involving ISPs prevents Click from enjoying the retail margin available from broadband Internet

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Section 3

Joe Tellez

Chief Technology Officer

How smart meter technology (called advanced metering infrastructure, or AMI) has changed since Tacoma Power launched the Gateway project

- Tacoma Power was ahead of its time
- Industry-wide adoption of wireless technology for AMI
- Tacoma Power doesn't need a wired telecommunications network for metering

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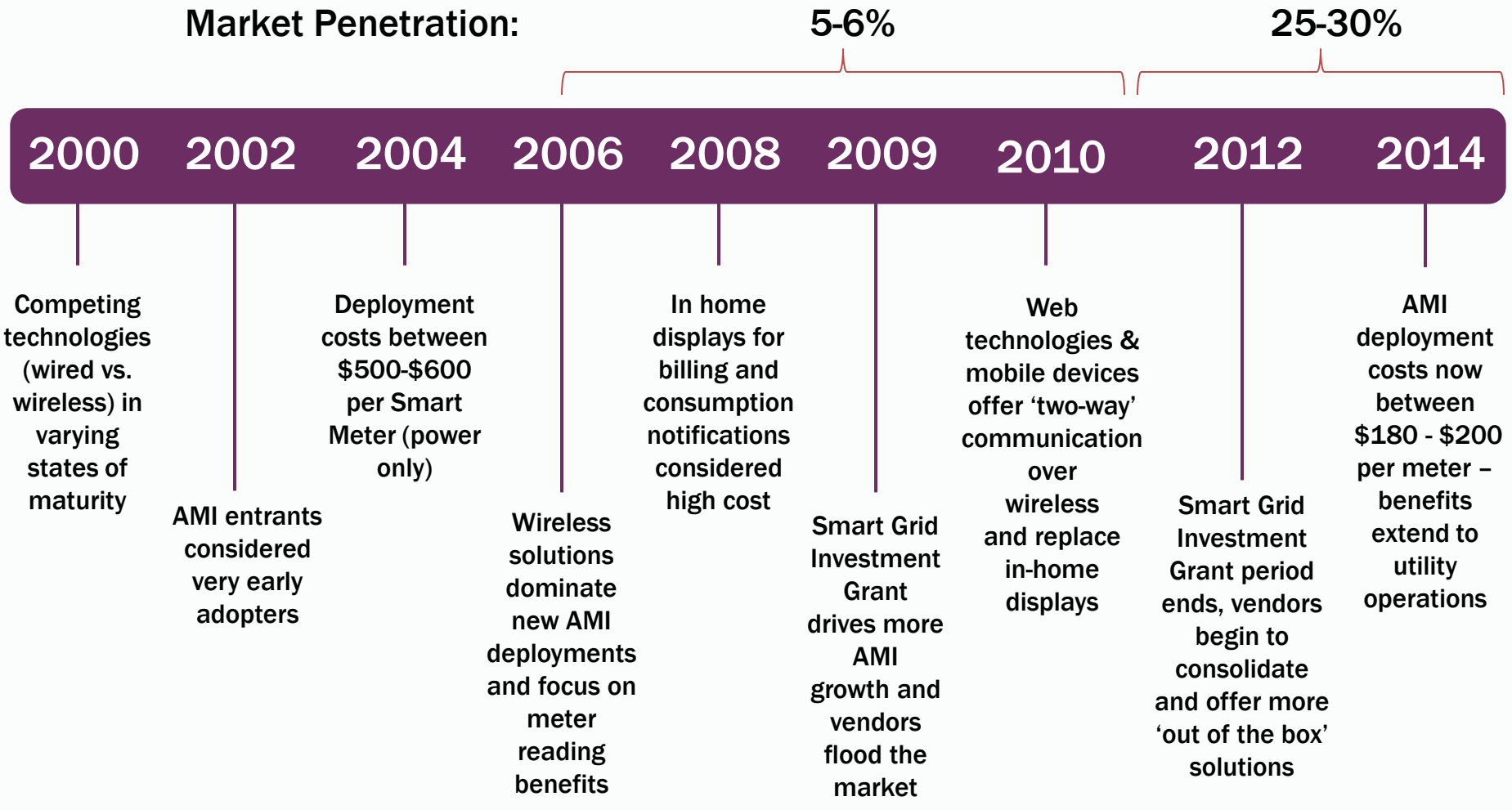
AMI TECHNOLOGY INDUSTRY



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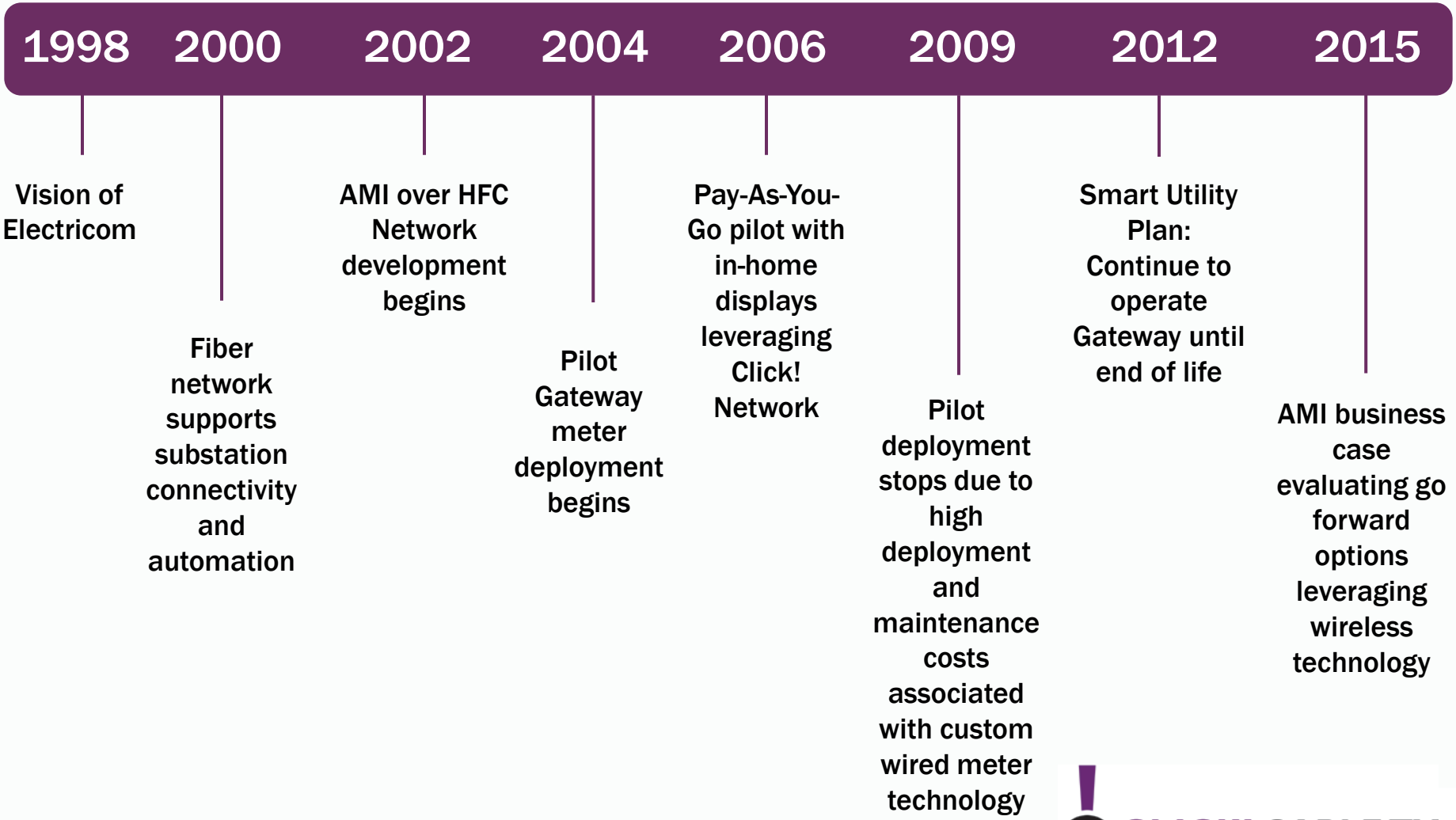
AMI TECHNOLOGY AT TPU



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GATEWAY METERS NOW OBSOLETE

- Ongoing meter reliability issues and higher-than-expected internal support costs
- No supplier available to sustain Gateway meters
- Alternative suppliers of coax wired smart meters nonexistent
- Wireless smart meter price points dropping for both power and water

Gateway end-of-life factors contributed to the overall decline in the use of Click! Network to serve Tacoma Power's AMI needs

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Section 4

Bill Berry

Rates, Analysis and Planning Manager

A closer look at how Tacoma Power allocates costs to Click! Network

- Click! Cable and Internet services rely on the telecommunications network far more than the electrical system
- Click! should be responsible for 94% of all telecommunication costs based on review of actual usage

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ALLOCATION SCENARIOS

- 2013/14 financials, budgets and rates reflect approximately 75/25 allocation between Click! and Electric
- The Click! financial trend presented on 3/31 with the Wave Broadband proposal showed 100% of the telecommunication expenses as an approximation of the new cost allocation
- Based on refined analysis and a third-party review, the cost allocation moving forward is 94/6

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FINANCIAL TREND - OVERALL

$ in millions	2009/10	2011/12	2013/14 (Projected)	2015/16 (Budget)	2015 (Budget)
Revenue	$46.2	$49.1	$53.5	$59.5	$29.8
O&M	($57.6)	($58.3)	($60.0)	($67.0)	($33.5)
Cash flow after O&M	($11.4)	($9.2)	($6.5)	($7.5)	($3.8)
A&R and capital	($25.8)	($7.4)	($5.4)	($7.6)	($3.8)
Cash flow after A&R and capital	($37.2)	($16.6)	($11.9)	($15.1)	($7.6)
Debt service	($3.9)	($3.9)	($3.9)	($3.9)	($2.0)
Net cash flow	($41.1)	($20.5)	($15.8)	($19.0)	($9.5)

Numbers rounded, may not add up

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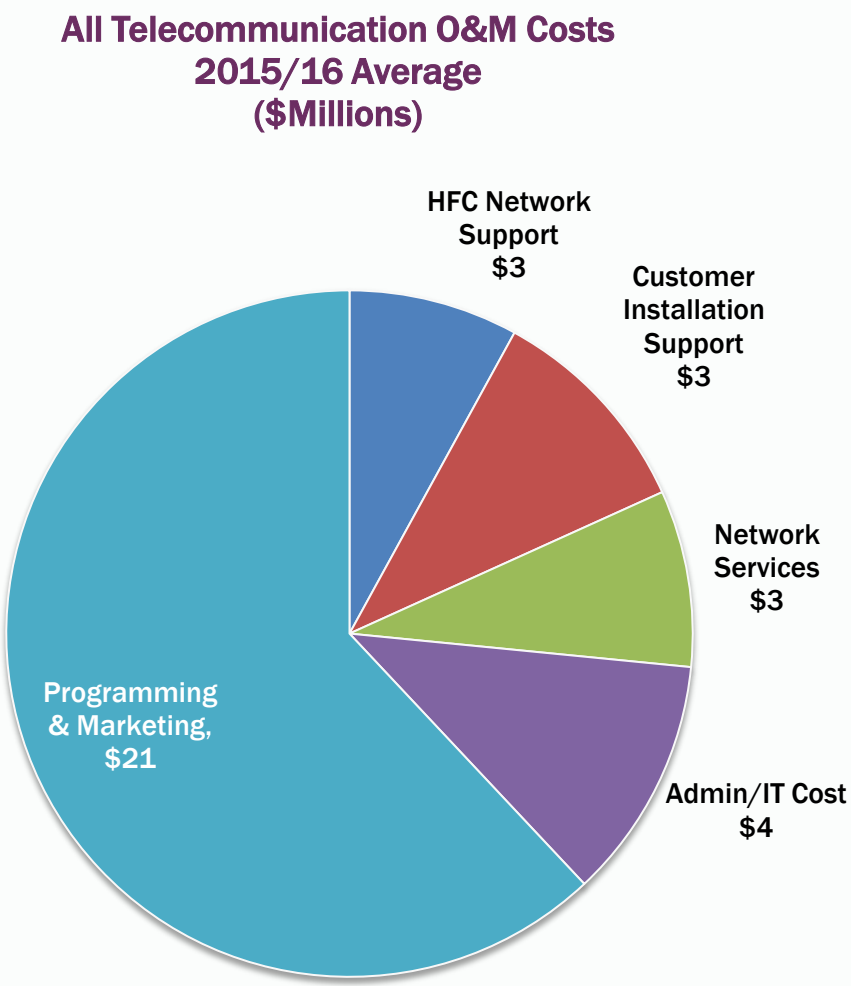
TOTAL TELECOMMUNICATIONS O&M COSTS



Total: $33.5 Million

Programming / Marketing
- Programming Fees
- ISP Advantage
- Customers Sales & Service

HFC Network Support
- Physical Maintenance of Fiber Network

Customer Installation Support
- Installation of Service Drops

Network Services
- Network Engineering
- Broadband Services
- Network Service Assurance

Admin/IT Cost
- Click! General Management
- Business Support Systems
- Sales & Marketing Administration

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WHY DO WE ALLOCATE?

- Click! is part of Tacoma Power
- Telecommunications operations are supported by 17 workgroups (cost centers), 10 of which provide some support to electric systems
- Costs should be allocated in a reasonable manner to understand Click! financial performance and make sound business decisions
- Power rates should not be higher than value of services rendered

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COST ALLOCATION HISTORY

2000

- Price Waterhouse Coopers recommended that telecommunication costs be allocated between Click! services and electric services

2002-2003

- Staff determined that allocation should be approximately 75/25 between Click! and electric
- Projected usage based on build-out to support AMI
- A 2003 study by Virchow Krause & Co. confirmed the 75/25 allocation is reasonable
- Allocation is used for financials , budgets and rates (currently, as well)

2012-2013

- Staff conducted a new internal cost allocation analysis
- Results showed allocations should be 96/4 between Click! and electric
- New allocations have been used for planning, but not formally adopted for financials , budgets & rates

2015

- Moss Adams, LLC engaged to review new allocation methodology
- As part of their analysis Moss Adams interviewed staff and recommended updating the 2013 study with current financial information
- Staff updated the study which resulted in 94/6 allocation factor between Click! and electric

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NETWORK SUPPORT & ASSURANCE COST ALLOCATIONS

Cost Centers

- 555300, 562700, 562800, 555600

Work Description

- Maintain the operations of the HFC network: engineering, design, conversion work, safety equipment, repairs, and operating supplies in order to keep the fiber and coaxial assets performing as intended.

Current Allocation

- 100% to Electric

Changes to Allocation

- Allocated costs based on total number of customer meter connections. All connections to a customer meter allocated to electric. All remaining drops allocated to Click! commercial.

	Current		Proposed	
	Click!	Electric	Click!	Electric
Allocation	0%	100%	51%	49%
Average 2015/16 Expenses	$0	$3,601,365	$1,851,698	$1,749,666

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SERVICE INSTALLATION COST ALLOCATION

Cost Center

- 553500

Work Description

- Installation and removal of coaxial service drops

Current Allocation

- 50/50 allocation between Click! and Electric

Changes to Allocation

- Based on the proportion of work orders related to wired AMI meters relative to all other work orders

	Current		Proposed	
	Click!	Electric	Click!	Electric
Allocation	50%	50%	98%	2%
Average 2015/16 Expenses	$1,302,156	$1,302,156	$2,552,226	$52,086

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DISPATCH COST ALLOCATION

Cost Center

- 553600

Work Description

- Manages workload and scheduling of the service and installation technicians

Current Allocation

- 100% allocation to Click!

Changes to Allocation

- Based on time spent working on wired AMI meter orders relative to other activities

	Current		Proposed	
	Click!	Electric	Click!	Electric
Allocation	100%	0%	93%	7%
Average 2015/16 Expenses	$486,143	$0	$452,113	$34,030

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PROPOSED O&M COST ALLOCATION CHANGES

		Allocation Factor Summary				Projected 2015/2016 O&M Expenses					
		Current		Proposed		Current Allocation		Proposed Allocation		Difference	
Cost Center	Description	Click!	Electric	Click!	Electric	Click!	Electric	Click!	Electric	Click!	Electric
HFC Network support											
555300	Click Network Oper	0%	100%	51%	49%	$ -	$ 3,237,152	$ 1,664,433	$ 1,572,719	$1,664,433	($1,664,433)
562700	PwrT&D HFC NtwrkCns	0%	100%	51%	49%	$ -	$ 1,661,373	$ 854,221	$ 807,152	$854,221	($854,221)
562800	PwrT&D HFC Ntwrk Eng	0%	100%	51%	49%	$ -	$ 447,264	$ 229,968	$ 217,296	$229,968	($229,968)
Customer Installation Support											
553500	Click Svc Install	50%	50%	98%	2%	$ 2,604,313	$ 2,604,313	$ 5,104,453	$ 104,173	$2,500,140	($2,500,140)
553200	Click Tech Op Admin	50%	50%	80%	20%	$ 342,639	$ 342,639	$ 550,691	$ 134,587	$208,052	($208,052)
553600	Click Dispatch	100%	0%	93%	7%	$ 972,286	$ -	$ 904,226	$ 68,060	($68,060)	$68,060
Network Services											
555400	Click Broadband Svcs	50%	50%	99%	1%	$ 1,176,936	$ 1,176,936	$ 2,330,334	$ 23,539	$1,153,398	($1,153,398)
555500	Clk!Ntwk Engineering	0%	100%	95%	5%	$ -	$ 1,359,223	$ 1,291,262	$ 67,961	$1,291,262	($1,291,262)
555600	Click Net Svc Assur	0%	100%	51%	49%	$ -	$ 1,856,940	$ 954,775	$ 902,165	$954,775	($954,775)
Admin/IT Cost											
551100	Click Admin	50%	50%	94%	6%	$ 1,598,813	$ 1,598,813	$ 3,002,143	$ 195,483	$1,403,330	($1,403,330)
552200	Click Mkt Admin	100%	0%	100%	0%	$ 2,393,718	$ -	$ 2,393,718	$ -	$0	$0
552100	Click MrktBusOpsAdm	100%	0%	100%	0%	$ 413,484	$ -	$ 413,484	$ -	$0	$0
552600	Click Busns Sys	50%	50%	100%	0%	$ 830,627	$ 830,627	$ 1,661,255	$ -	$830,627	($830,627)
Other (Unchanged)											
552300	Click Marketing Svc	100%	0%	100%	0%	$ 37,271,387	$ -	$ 37,271,387	$ -	$0	$0
552400	Click ISP Adv	100%	0%	100%	0%	$ 553,700	$ -	$ 553,700	$ -	$0	$0
552500	Click Cust Sales	100%	0%	100%	0%	$ 2,802,132	$ -	$ 2,802,132	$ -	$0	$0
553700	Click Converter Inv	100%	0%	100%	0%	$ 878,405	$ -	$ 878,405	$ -	$0	$0
		77%	**23%**	**94%**	**6%**	**$ 51,838,441**	**$ 15,115,281**	**$ 62,860,587**	$ 4,093,135	$ 11,022,146	**$ (11,022,146)**

Does not include debt service, taxes, or capital

2015 $ 5,252,766
2016 $ 5,769,380

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Tacoma Public Utilities Click! Cost Allocation Consulting Report

May 20, 2015

Julie Desimone, Partner
Jennifer Chu, Manager

MOSS-ADAMS LLP
Certified Public Accountants | Business Consultants

Acumen. Agility. Answers.

SCOPE

- Review of the allocation method as described in TPU's 2013 Click! allocation change draft document dated March 18, 2013
- Gain an understanding of the changes made to the allocations from an earlier 2003 allocation study.

PROCESS

- Read and gain an understanding of the 2013 Allocation Memo
- Requested supporting documentation
- Interviewed key employees and stakeholders
- Developed recommendations to 2013 allocation memo

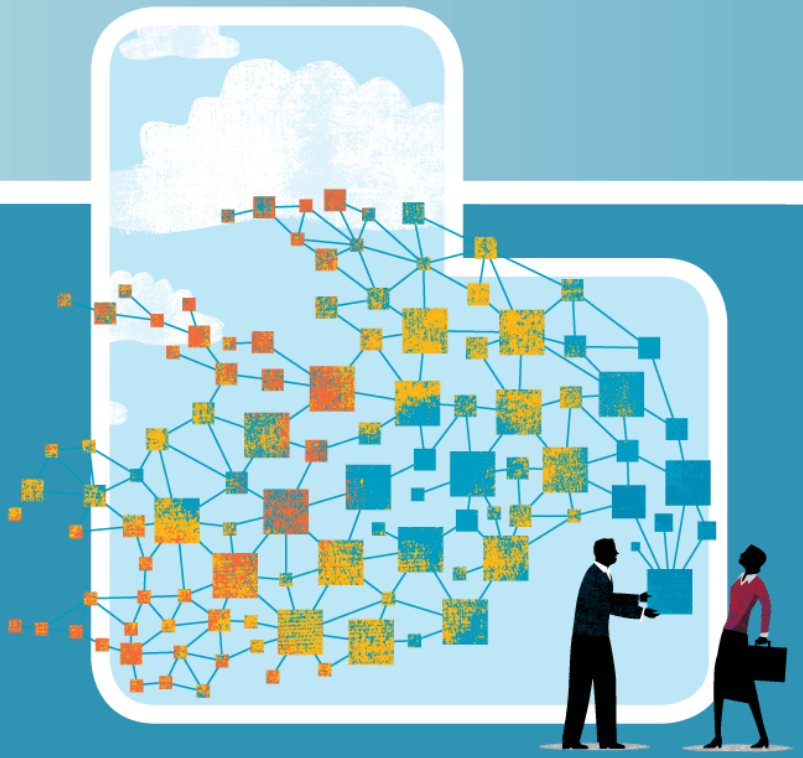
ANALYSIS

- Recommended a few changes to the 2013 allocation memo
- Read the 2015 allocation memo noting our recommendations were incorporated
- Full details of our analysis can be found in our report dated May 20, 2015

CONCLUSION

- 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.**

THANK YOU!



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Section 6

Bill Berry

Click! revenues do not cover its costs

- Operating revenues do not fully cover operating expenses and taxes
- Operating revenues do not cover any of the annual capital requirements
- Operating revenues do not cover imputed debt service
- Even if imputed debt service were not included, Click! would still run at a deficit and the business model would still need to change

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RECONCILIATION TO FINANCIAL SCENARIOS

2015/16 Average –$ in millions

	100% Telecom O&M	94% Telecom O&M Allocation to Click!
Revenue		
Current Revenue	$27.4	$27.4
Revenue from Rate Increases*	$2.3	$2.3
Total Revenue	$29.7	$29.7
O&M Expense + Taxes		
Click!	$32.4	$30.5
HFC	$1.1	$1.0
Total O&M + Taxes	$33.5	$31.5
Cashflow after O&M + Taxes	($3.8)	($1.8)
A&R + Capital	$3.8	$3.8
Net Cashflow after A&R + Capital	($7.6)	($5.6)
Imputed Debt Service	$2.0	$2.0
Net Cash Flow	($9.6)	($7.6)

* Assumes 17.5% cable TV rate increase in 2015 and 10% cable TV rate increase in 2016, and 10% ISP rate increase in August 2016

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IMPUTED DEBT SERVICE

- The Virchow Krause in 2003 allocation studies determined that 27.4% of the original Tacoma Power capital investment in telecommunications plant is used by and allocable to Click!
- Tacoma Power financed with cash rather than bonds
- Intention from the beginning was for Click! to be self-sustaining, and repay its share of the capital investment
- That has not happened, so Tacoma Power has used imputed debt service assumptions in its financial analyses - original investment repaid by Click! over 20 years at a 5.5% interest rate
- Whether or not debt service is included, Click! revenues do not cover the costs for Click! services

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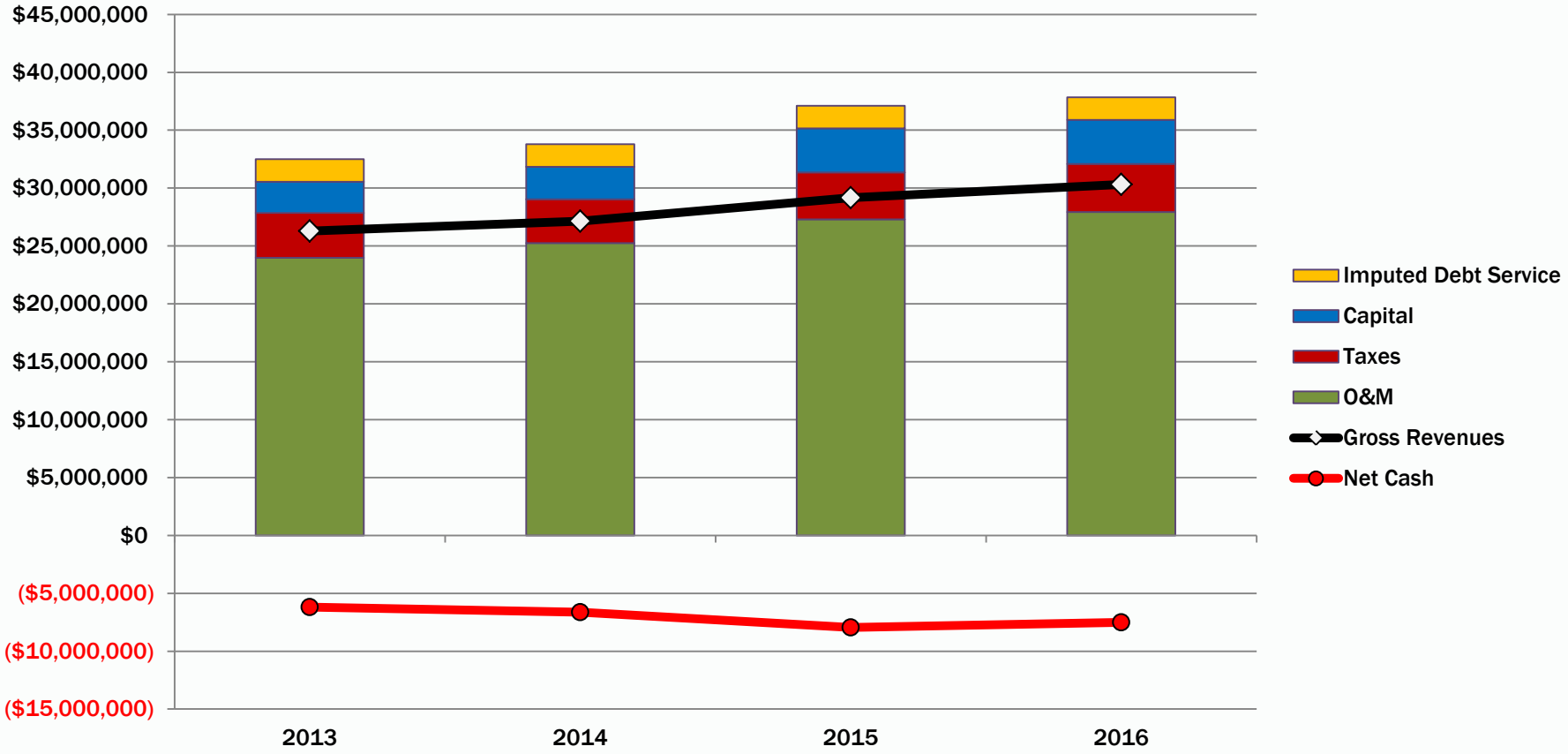
CLICK! REVENUES & EXPENSES

94/6 COST ALLOCATION



- Includes imputed debt service
- Assumes 17.5% cable TV rate increase in 2015 and 10% cable TV rate increase in 2016, and 10% ISP rate increase in August 2016
- Numbers may not add up due to rounding

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Section 7

Chris Robinson

Tacoma Power Superintendent

Summary

SUMMARY

- Original vision for Click! was optimistic, placed emphasis on cable TV and committed to an unsustainable hybrid business model
- The hybrid business model has not been able to withstand business environment and consumer consumption changes
- Wired network no longer needed to support AMI – industry shifted to wireless, as will Tacoma Power
- A recent review of network use indicates that Tacoma Power should be responsible for 6% of total telecommunications costs
- Moss Adams confirms that the utility's allocation methodology is consistent with the current use of network
- Under the current business model, Click! revenues do not cover the cost of Click! services – whether factoring in debt service or not

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