

Tacoma Power

Undergrounding Existing Overhead Electric Distribution Facilities

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Public Utility Board Discussion – January 24, 2017

Purpose

Part 1 – Clarify existing code and policy language for City of Tacoma Public Works projects.

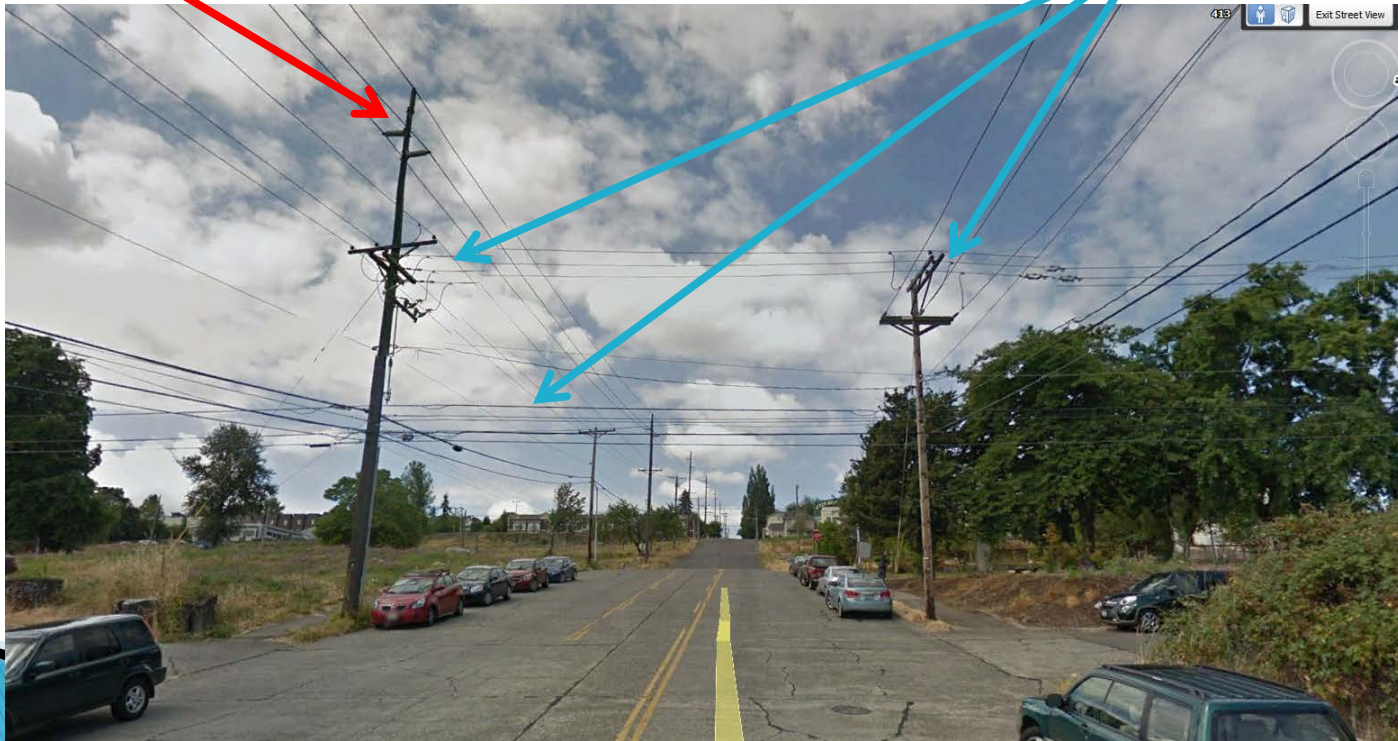
Part 2 – Provide clarity regarding optimal Tacoma Power contribution for undergrounding overhead distribution lines to aid development and redevelopment within Tacoma

Context

Seeking specific policy decisions and PUB direction regarding Commercial Distribution Undergrounding.

Transmission

Distribution



Benefits of Undergrounding

Economic

Clearance – Zero lot line development for higher density/Land Use Planning
Opportunity for Coordination with City Street Improvement Projects
Harmonize with other City Policies & Objectives

Utility

Improved reliability, reduced liability and reduced O&M costs

Projected Utility Justifiable Contribution for Undergrounding Distribution
Electrical Infrastructure (Leidos 2016):

- ✓ Residential: 18% to 33%
- ✓ Commercial (light/medium): 6% to 13%
- ✓ Industrial (heavy commercial): 2% to 5%

What We've Heard

City of Tacoma | Community and Economic Development

2017-2019 Brewery District Current and Planned Development Projects



- Tacoma Community & Economic Development Department reports that Brewery District will experience \$500M in new private investment over the next 2-4 yrs.
- Met with Developers directly who are interested in LID/UG policies
 - Commerce – Brewery Lofts
 - Town Center Development
 - 7 Seas Brewery
- Met with City re: shared costs for infrastructure upgrades
- City Council Feedback
 - They want a Policy
 - Focus on (new) commercial projects
 - Subarea planned or specific zones that call for undergrounding

Part 1

Existing Contribution Policies related to Undergrounding

Code Relevant to Public Works Projects within the City of Tacoma

- ▶ **TMC 10.24.020 Cost of relocation when street improved** (graded, paved, drained), utility pays all costs as necessary for relocating, removing, rearranging or readjusting.
- ▶ **TMC 10.24.030 Cost of relocation when grade changed** (change the grade, alignment or width), utility pays the cost of all materials necessary for the relocation, replacement or rearrangement and the fund charged with the street improvement shall pay all other costs.

Public Works Cost Sharing Examples

- ▶ Broadway LID – 2007. Power paid 100% costs to convert overhead distribution line to underground. (\$3M)
TMC 10.24.030
- ▶ Lincoln District – 2016. Power paid 100% costs to replace overhead distribution lines. (\$343k).
TMC 10.24.030

Franchise Agreements





















(See Handout)

Commonalities among TPU franchises:

- ▶ Distribution lines ONLY; transmission service is NOT covered.
- ▶ Overhead conversion projects are divided into two groups:
 - In conjunction with an Local Improvement District (LID)
 - In conjunction with a Public Works Improvement Project
- ▶ TPWR contribution DOES NOT include secondary services, telephone, fire alarm, cable TV, and street lighting circuits.
- ▶ Property owner is responsible for costs to convert service

Regional Utility OH to UG Contributions

Customer Share / Utility Share

Company	Residential Single Family	Multi-Family Commercial LID	Public Works Government Entity
 Within City of Tacoma			
 Per Franchise Agreements			
 PUGET SOUND ENERGY			
 Seattle City Light			
			

* TMC 10.24.030 references a cost share to relocate infrastructure. Historically TPWR has contributed to select OH to UG distribution projects.

Trenching, restoration, surveying costs included in total project and split 50/50

Government Entity pays 100% of trenching, restoration, surveying costs; remaining project costs split 40/60

Part 2

Distribution Undergrounding Contribution Policy for Commercial Developments

Code Relevant to Developer Relocation within the City of Tacoma

- ▶ **10.24.040 Relocation not necessary, for convenience.**

Any charges for relocation, replacement or rearrangement of any utilities, when the same is done for the convenience of the Department of Public Works or the contractor engaged in making the street improvement, and where such relocation, removal, rearrangement or readjustment is not necessary to such street improvement, shall be borne by the Department of Public Works or the contractor making the street improvement.

Developer Cost Sharing Examples

- ▶ LeMay Museum – 2011/2012. Customer paid 100% costs for distribution overhead to underground conversion
TMC 10.24.040
- ▶ Dock Street – 2000, 2007. Power paid 100% costs to convert overhead distribution line to underground and then relocate. (\$940k).
TMC 10.24.040

Justification for UG Policy for Commercial Contribution

- ▶ Encourages private sector investment in development and redevelopment
- ▶ Provides consistency inside and outside City of Tacoma
- ▶ Leverages trenching and construction efforts of other utilities
- ▶ Positions Tacoma Power as a strong partner in City's Subarea Planning efforts.
- ▶ Leidos study confirms tangible Utility benefits (6% to 13%)

Commercial UG Policy Considerations

- ▶ Geographic area covered by Policy
- ▶ Percentage contribution by Utility

Commercial UG Policy Geographic Options

1. **Tacoma City-wide**
2. **Central Business District**
 - **North Downtown Subarea**
 - **South Downtown Subarea**
 - **Hilltop Subarea**
3. **Brewery District**



	Consistent with Franchise Agreements	More targeted, (growth area) Impact	Responsive to City/PW/Council Suggested Scope	Aligns Investment with City (Subarea Plans)	Limits Beneficial Projects	High Cost Exposure
Tacoma City Wide	✓					✓✓✓
Central Business District		✓	✓✓	✓✓	✓	✓✓
Brewery District		✓✓	✓	✓	✓✓	✓

Commercial UG Policy Contribution Options

- 1. 20% for Multi-Family/Commercial projects**
- 2. 30% for Multi-Family/Commercial projects**

	Provides Competitive Advantage for Economic Development	Supports UG Projects	Comparable to Franchise Agreements	Limits Financial Exposure	Aligned with Utility Justifiable Benefits (Leidos)
20% Commercial	✓	✓		✓	✓
30% Commercial	✓✓	✓✓	✓		

Financial Exposure for Policy Options

Tacoma Power Commercial Undergrounding - Maximum Exposure			
Geographical Area	Estimated UG Cost	20%	30%
City of Tacoma	\$1.1 Billion	\$220 Million	\$330 Million
Central Business District	\$106 Million	\$21.2 Million	\$31.8 Million
Brewery District	\$21.8 Million	\$4.4 Million	\$6.5 Million

Specific Brewery District Requested Commercial Undergrounding - Likely Exposure			
Town Center	\$3.5 Million	\$700,000	\$1 Million
Commerce Street	\$1 Million	\$200,000	\$300,000
Jefferson Street	\$500,000	\$100,000	\$150,000

Recommended Policy Action

- 1. Utilize existing TMC for Public Works project contributions**
- 2. Contribute 30% for Multi-Family/ Commercial Distribution UG projects**

Mitigate financial exposure:

- Limit geographic area to Brewery District**
- Cap budget for contributions at \$10 million**
- 3-Year pilot program; annual check-ins with PUB**
- Minimum practical size (e.g., 1 block, both sides of street, etc.)**
- Exceptions require PUB action**

Recommended Policy Contingencies

City of Tacoma actions:

- **City of Tacoma requires customers to convert their service connection**
- **City of Tacoma requires other utilities (telecom) to convert to underground**



Next Steps

PUB

- ▶ Initial feedback (today)
 - Geographical Area, Contribution level
- ▶ Check-in, additional feedback (Feb 14)
- ▶ Consider resolution for Feb 28 meeting

Power Staff

- ▶ Work with City to explore options to address customer conversion costs
- ▶ Develop criteria
- ▶ Consult Legal regarding implementation

Tacoma Public Utilities 2017 Residential Customer Satisfaction Survey

ISO 20252 Certified



MARKETSTRATEGIES
INTERNATIONAL

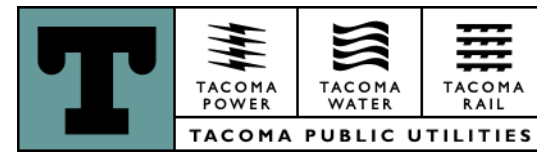
Research Objectives



Tacoma Public Utilities established their Customer Satisfaction tracking research program in fall 2014 among Residential customers in order to:

- Develop a method for assessing customer satisfaction and customer evaluations of the performance of the organization to determine priorities for organization actions and investments in operations, training, communications, and product and service offerings.
- Provide actionable guidance to help the organization plan programs and initiatives that will be effective in strengthening customer relationships
- Give TPU employees easy access to specific, direct feedback that can be used to identify customer preferences and concerns, plan responses, and monitor performance and progress over time.

Methodology



- For the 2017 wave, telephone interviews were conducted among Tacoma Public Utilities' Residential customers from July 26th to August 3rd, 2017 and online fielding was introduced and took place from August 1st to August 21st, 2017. Both methodologies used lists provided by Tacoma Public Utilities.
- A total of 400 telephone interviews and 1,429 online interviews were conducted across five customer types. The telephone quotas were set in proportion to their distribution in the TPU residential customer population while the online interviews were weighted to match this distribution:

	Counts		
	Phone	Web	Weighted Web
Power, Water, and Environmental Services	130	552	465
Power only single-family	91	330	324
Power only multi-family	101	263	358
Water only	44	136	158
Power and Water only	34	148	124

- In proportion to the primary contact phone number type (landline or mobile) provided to TPU by Residential customers, 31% of phone respondents were contacted via their landline phone, and 69% were contacted via their mobile phone.
- Tacoma Public Utilities was identified as the study sponsor.
- Residential customers were screened and qualified based on the following criteria:
 - Head or co-head of household who is familiar with their TPU services
 - Adult, 18 years of age and older.
- The sampling error for 400 telephone interviews is +/-4.9% at the 95% confidence level.
- The sampling error for 1,429 online interviews is +/-2.6% at the 95% confidence level.

Report Terminology



- Throughout this report, results are shown for four overlapping TPU customer groups:
 - All Customers includes all TPU residential customers (Power, Water, Environmental Services customers, Power-only customers, Water-only customers, and Power and Water only customers).
 - Power, Water, Environmental Services Customers is comprised of customers with all three services.
 - All Tacoma Power Customers is comprised of all power customers, including customers with all three services, power only customers, and power and water only customers.
 - All Tacoma Water Customers is comprised of all water customers, including customers with all three services, water only customers, and power and water only customers.
- Statistically significant differences of the Summer 2015 and the Summer 2016 survey against the current Summer 2017 survey, tested at the 95% confidence interval, are indicated by arrows (↕) on all charts and tables.
- ○/○ circles indicate significantly higher/lower percentages for the 2017 web results versus the 2017 phone results.
- Average Monthly Bill is calculated based on billing data from TPU's database. (Average monthly billing data was not available for all customers in the survey sample.)
- Bimonthly / Budget Billing is based on the Billing field in TPU's database. (This field was not fully populated – so cases with missing Billing status in this field were excluded from the analyses.)
 - The Bimonthly and Budget Billing cuts are broken out by average monthly bills of less than \$150 and those \$150 or more to somewhat isolate the effect of billing status on the measures being compared.

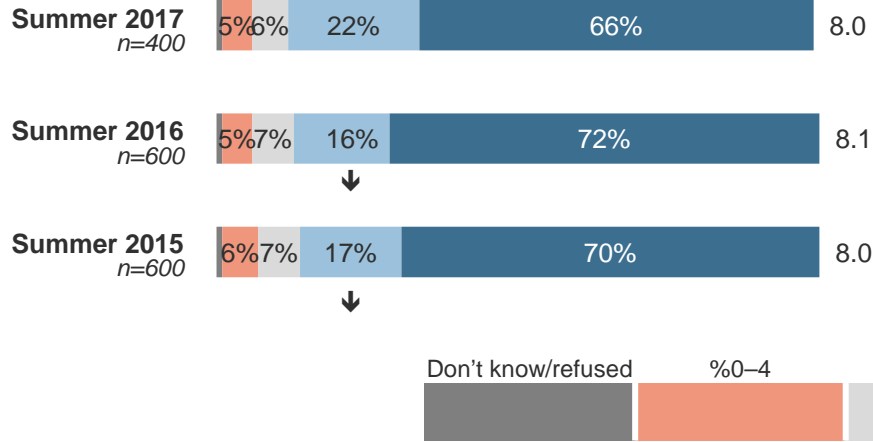
Tacoma Public Utilities

Abbreviated Results

Overall Satisfaction: Tacoma Public Utilities



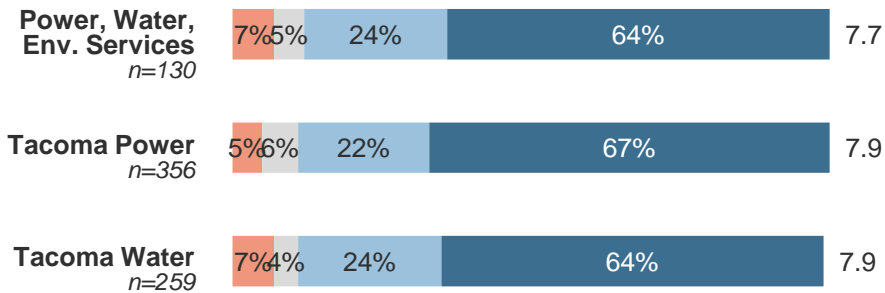
All TPU Customers - Phone



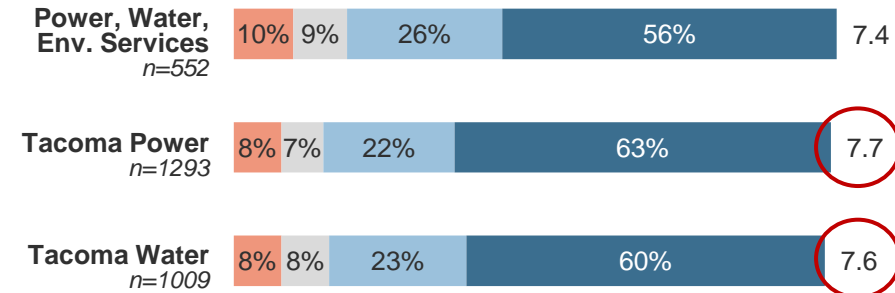
All TPU Customers - Web



By Customer Group – Phone (2017)



By Customer Group – Web (2017)



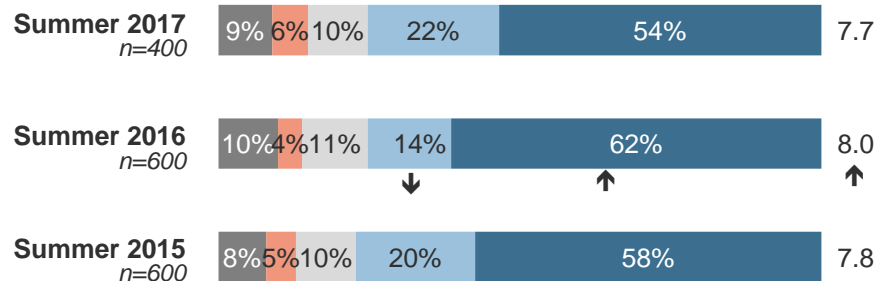
Q2. Overall, how satisfied or dissatisfied are you with Tacoma Public Utilities as a provider of services in your area in general, and not necessarily just those of which you are a current customer or user?

↑↓ Indicate significant differences between the current wave and previous waves. ○ / ○ circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

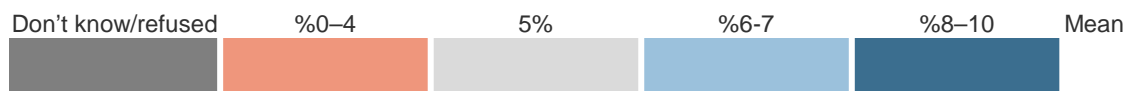
Being Well Managed



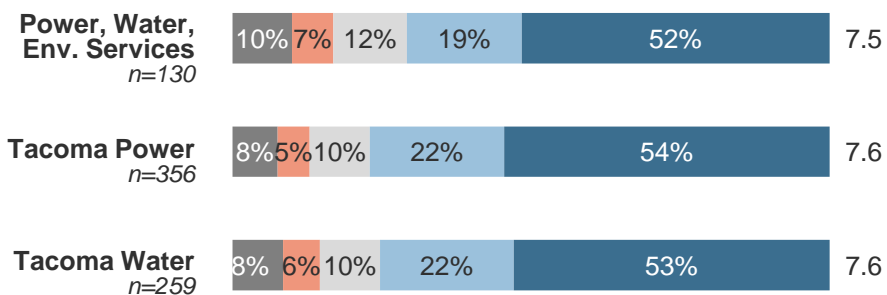
All TPU Customers - Phone



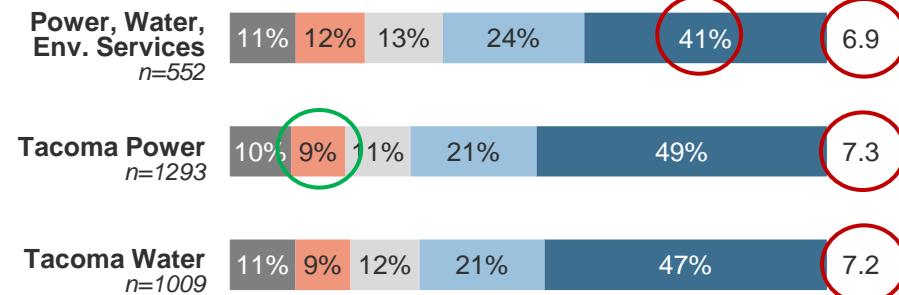
All TPU Customers - Web



By Customer Group – Phone (2017)



By Customer Group – Web (2017)



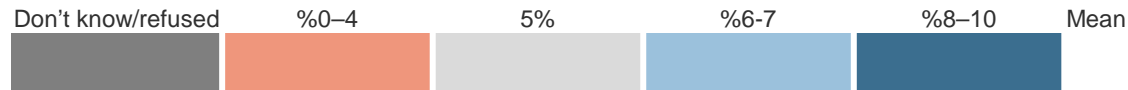
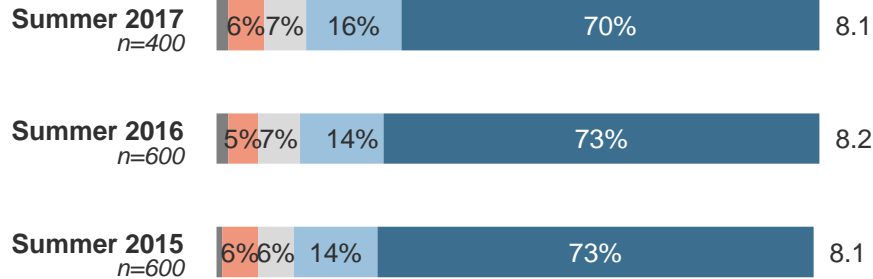
How would you rate T-P-U's performance with regard to...?
MANAGE. Being well managed

↑↓ Indicate significant differences between the current wave and previous waves. ○ / ○ circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.⁷

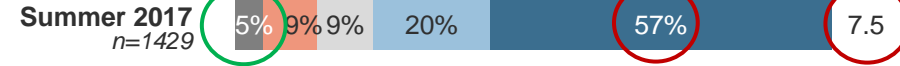
Being an Organization You Can Trust



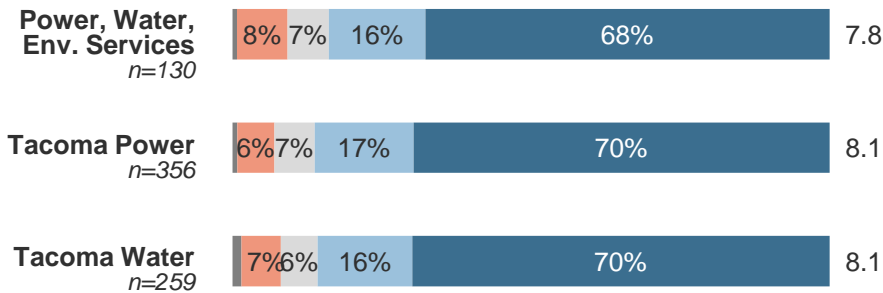
All TPU Customers - Phone



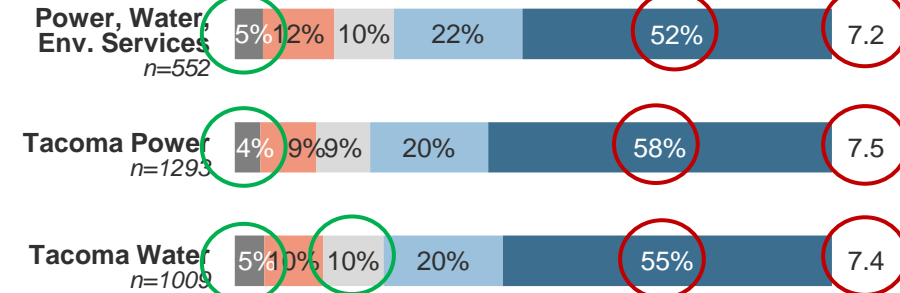
All TPU Customers - Web



By Customer Group – Phone (2017)



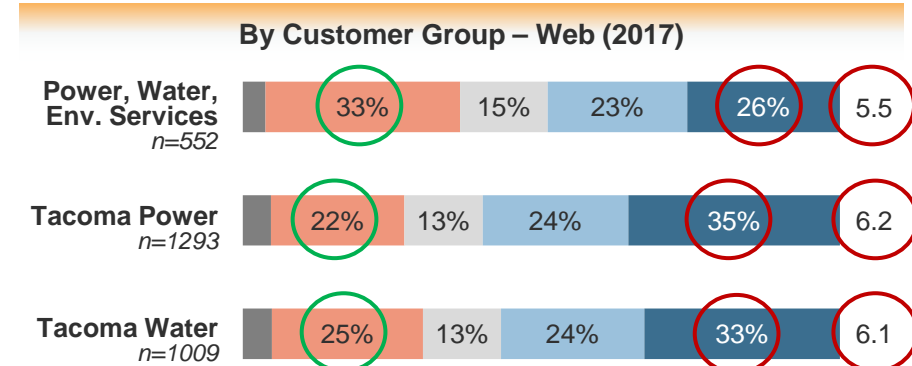
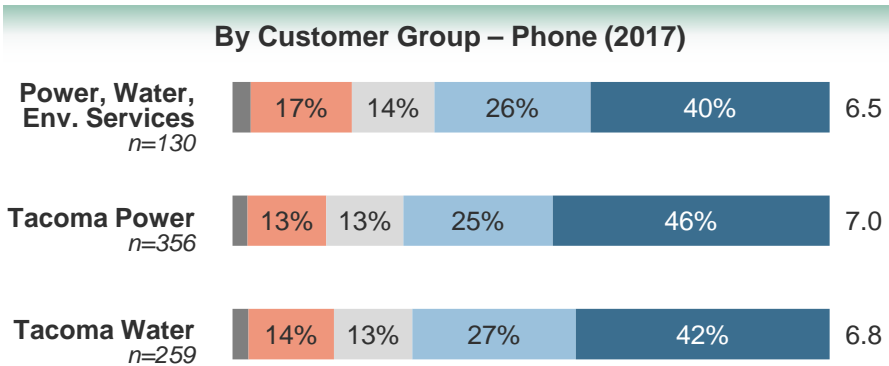
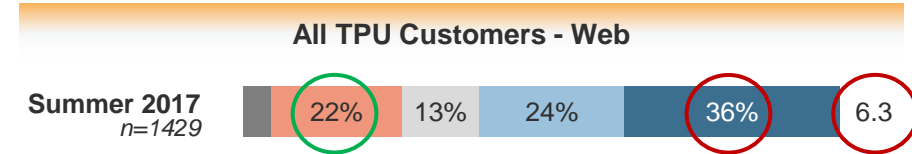
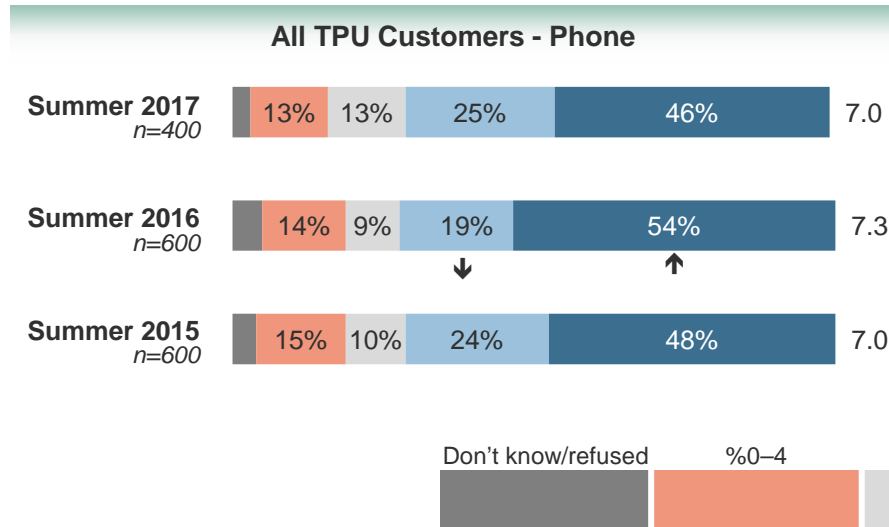
By Customer Group – Web (2017)



How would you rate T-P-U's performance with regard to...?
TRUST: Being an organization you can trust

↑↓ Indicate significant differences between the current wave and previous waves. ● / ○ circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

Controlling Costs



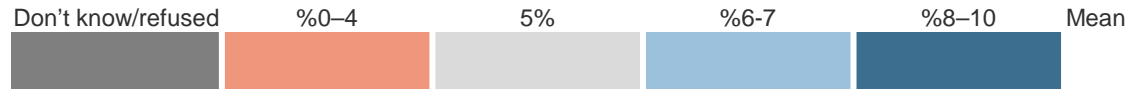
How would you rate T-P-U's performance with regard to...?

COSTC. Controlling costs to keep rates low

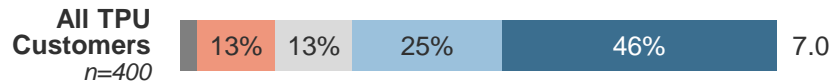
↑↓ Indicate significant differences between the current wave and previous waves. Green / Red circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

Controlling Costs

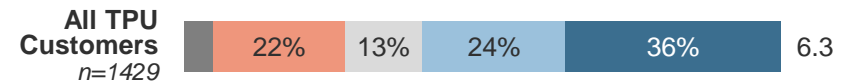
By Average Monthly Bill Amount, Budget Billing Status



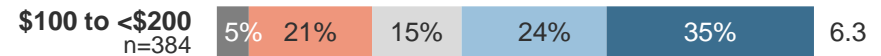
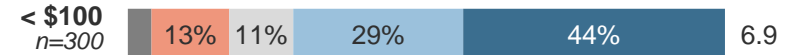
TPU Customers – Phone (2017)



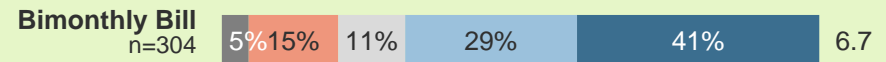
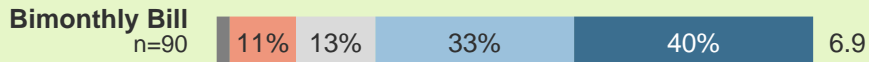
TPU Customers – Web (2017)



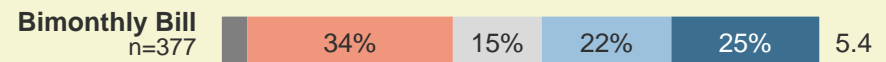
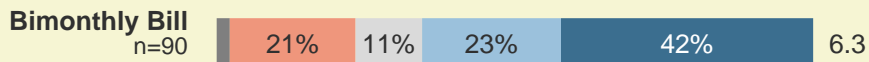
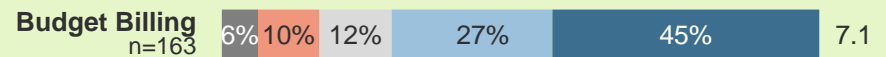
By Average Monthly Bill Amount



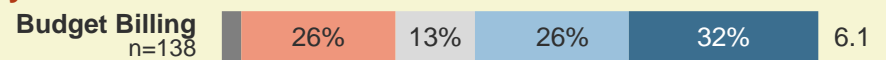
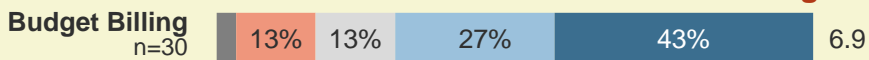
By Bimonthly / Budget Billing



Average Monthly Bill <\$150

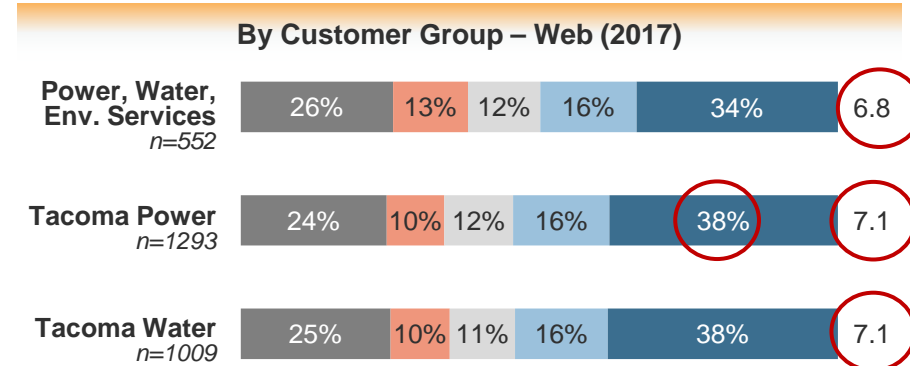
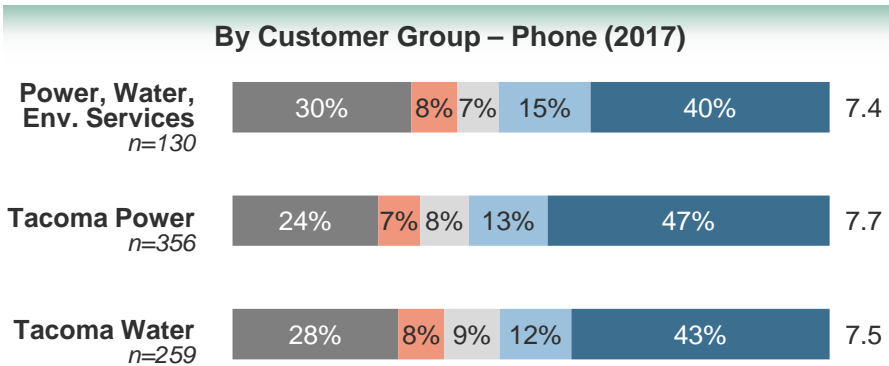
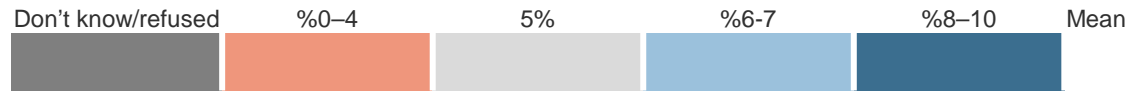
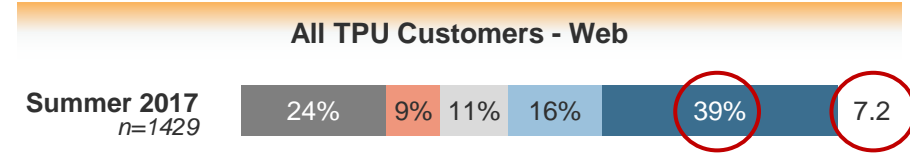
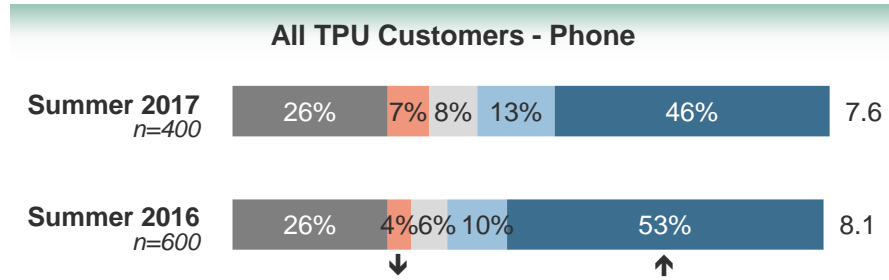


Average Monthly Bill \$150+



How would you rate T-P-U's performance with regard to...?
COSTC. Controlling costs to keep rates low

Offering assistance to customers who are behind on paying their utility bills



How would you rate T-P-U's performance with regard to...?

BILLAST. Offering assistance to customers who are behind on paying their utility bills

↑↓ Indicate significant differences between the current wave and previous waves. ○ / ○ circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

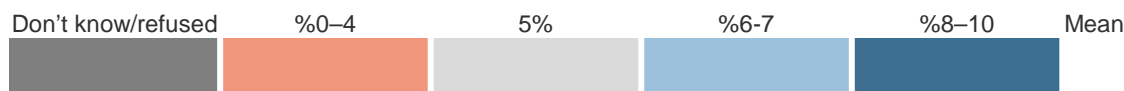
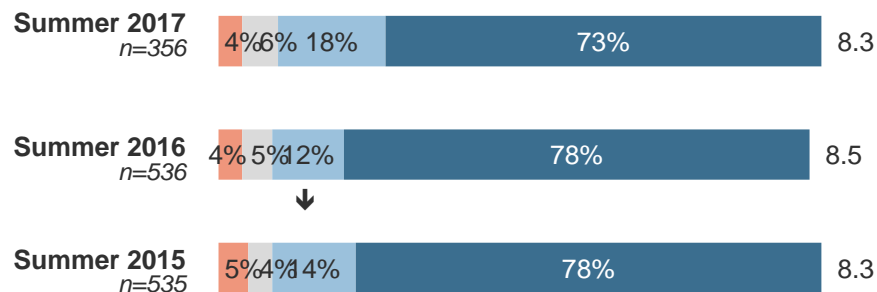
Tacoma Power

Electric Service Measures

Overall Satisfaction with Electric Service



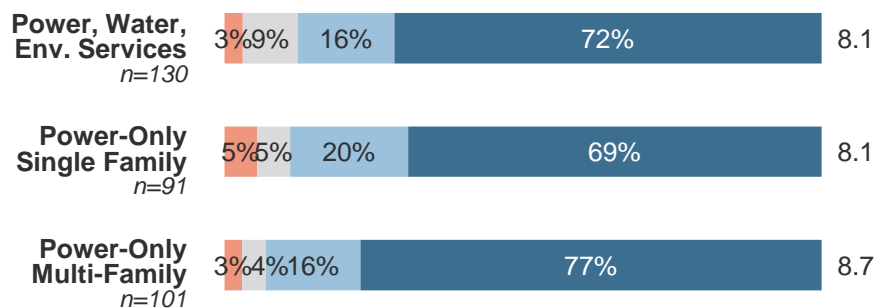
All Tacoma Power Customers - Phone



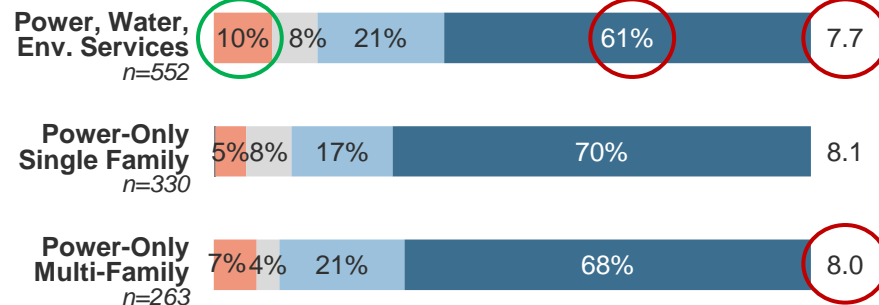
All Tacoma Power Customers - Web



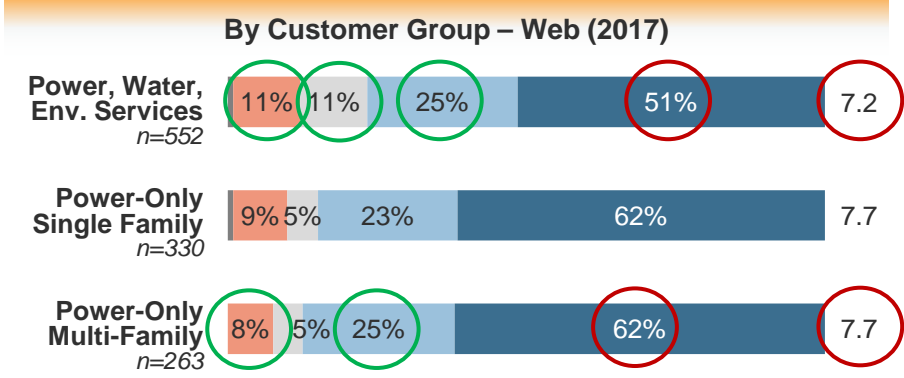
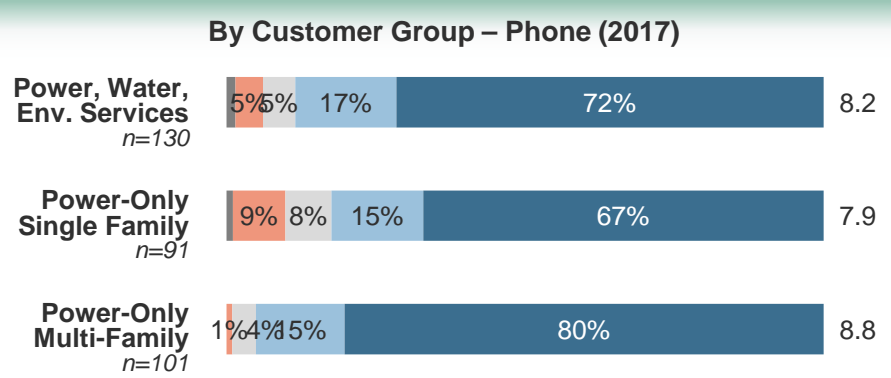
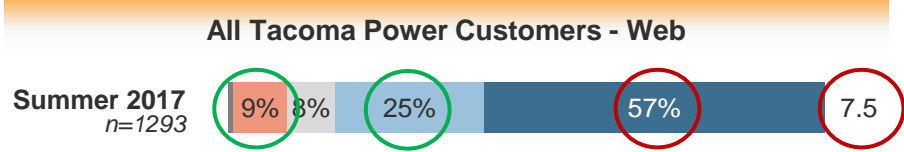
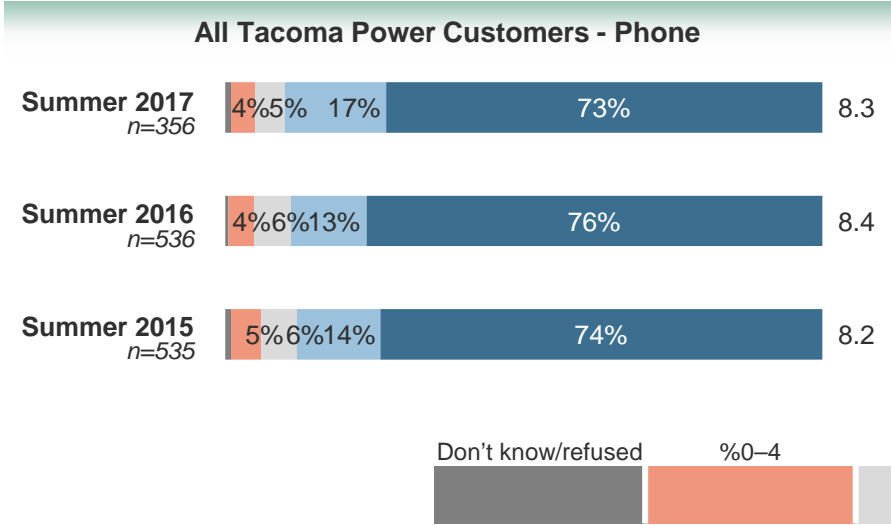
By Customer Group – Phone (2017)



By Customer Group – Web (2017)



Value of Electric Service



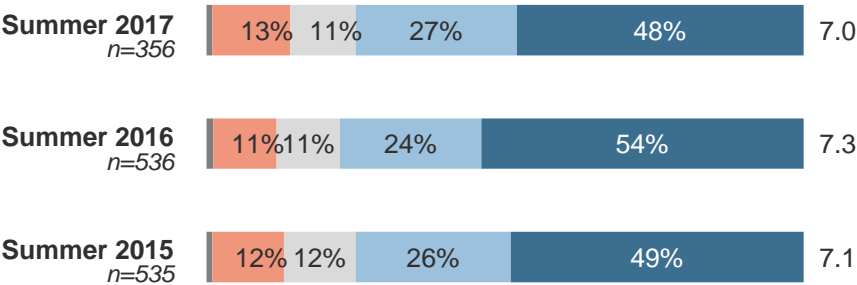
Q12. Using the scale from a 0 to 10 scale where a 0 means you receive a very poor value and a 10 means you receive a very good value, how would you rate the value you receive from Tacoma Power in terms of the electric service you receive.

↑↓ Indicate significant differences between the current wave and previous waves. ● / ○ circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

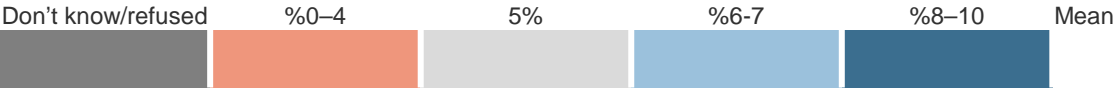
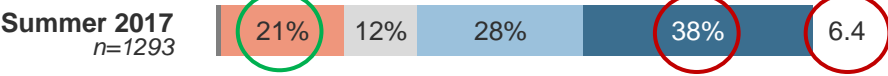
Reasonableness of Electric Rates



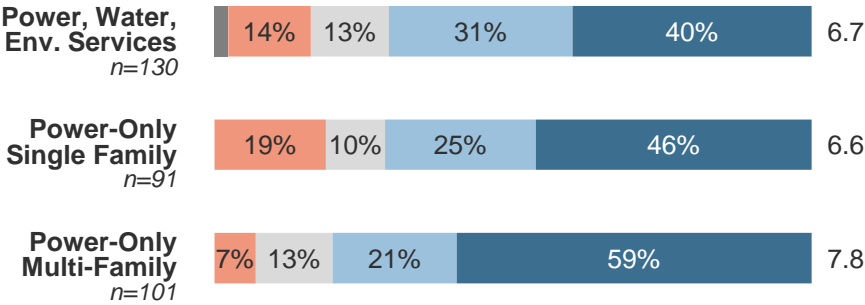
All Tacoma Power Customers - Phone



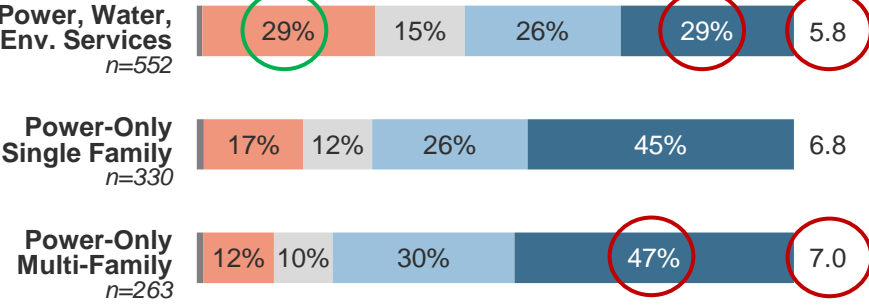
All Tacoma Power Customers - Web



By Customer Group – Phone (2017)



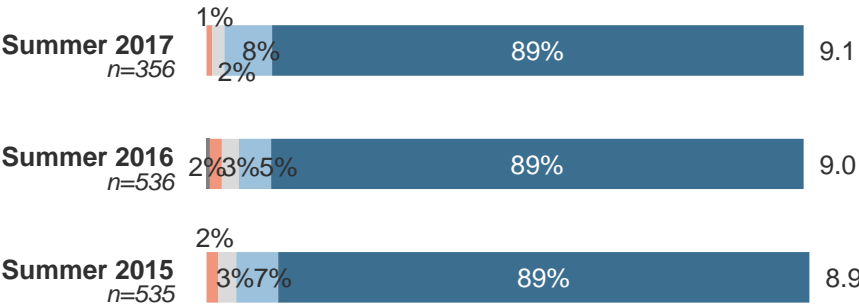
By Customer Group – Web (2017)



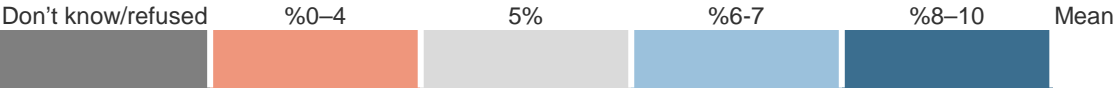
Providing Reliable Electric Service



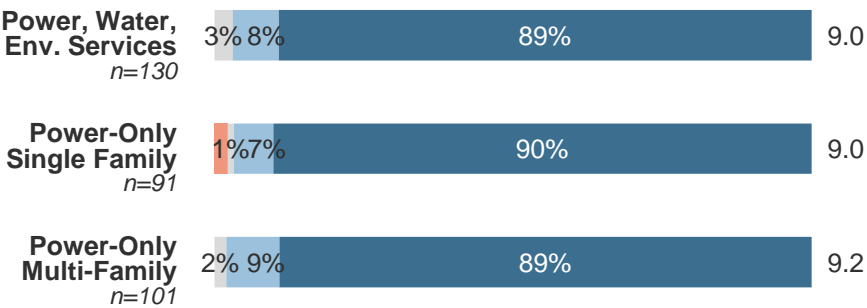
All Tacoma Power Customers - Phone



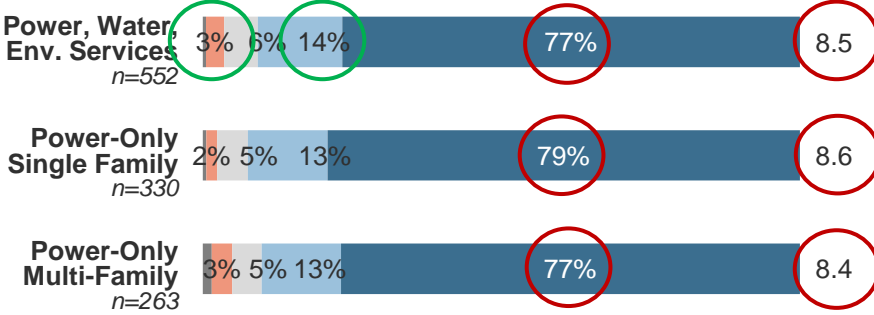
All Tacoma Power Customers - Web



By Customer Group – Phone (2017)



By Customer Group – Web (2017)



How would you rate T-P-U's performance with regard to...?
RELIABLE. Providing reliable electric service

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Tacoma Water

Water Service Measures

Overall Satisfaction with the Water Service



All Tacoma Water Customers - Phone

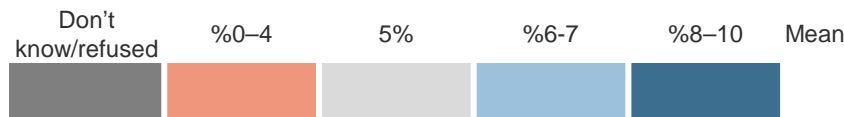
Summer 2017
n= 208



Summer 2016
n= 314



Summer 2015
n= 322



All Tacoma Water Customers - Web

Summer 2017
n= 836



What does Tacoma Water do well to earn your satisfaction?		Phone	Web
	2015 (A)	2016 (B)	2017 (C)
All water customers	n= 223	224	151
Reliable service	38%	34%	36%
Water quality	35%	36%	34%
Satisfied/no problems	21%	16%↓	25%
Billing/payments	8%	7%	8%
Responsive	6%	9%	7%
Maintenance	6%	0%↓	7%
Communication	9%	7%	6%
Reasonable rates	8%	4%	6%
Other	17%	15%	11%

What does Tacoma Water need to improve most to earn your satisfaction?		Phone	Web
	2015 (A)	2016 (B)	2017 (C)
All water customers	n= 99	89	56
Rates	38%	36%	23%
Water quality	18%	24%	21%
Billing	4%↓	6%↓	18%
Customer service	11%	6%	11%
Maintenance	6%	10%	5%
Communication	5%	4%	5%
Other	5%	10%	11%

Q3_2 . Based on your overall experience as a customer, and using that same scale, how satisfied or dissatisfied are you with water service provided by Tacoma Water

Q5_1. What does Tacoma Water do well to earn your satisfaction? (Asked of respondents who answered Q3_2 with a rating of 8-10)

Q5_2. What does Tacoma Water need to improve most to earn your satisfaction? (Asked of respondents who answered Q3_1 with a rating of 0-7)

↑↓ Indicate significant differences between the current wave and previous waves.

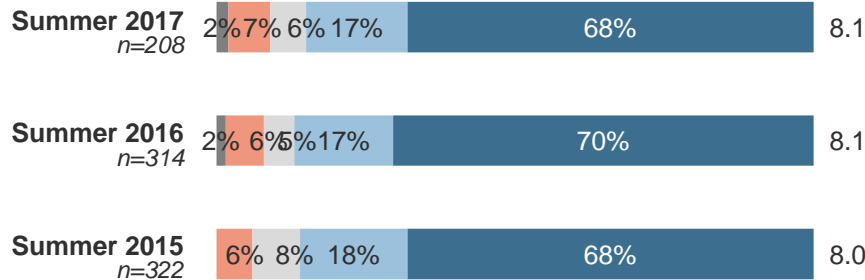
Red text indicates a significantly lower rating among web respondents when compared to phone respondents in 2017.

Green text indicates a significantly higher rating among web respondents when compared to phone respondents in 2017.

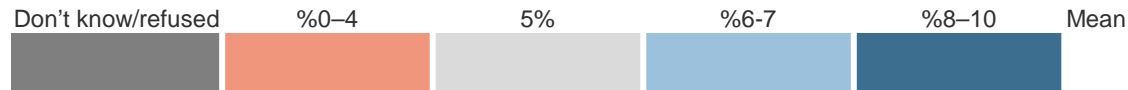
Value of Water Service



All Tacoma Water Customers - Phone

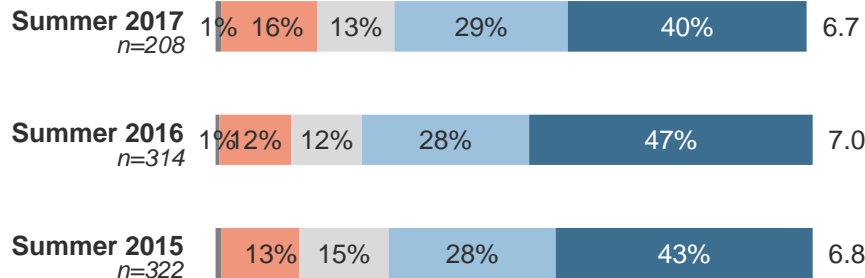


All Tacoma Water Customers - Web

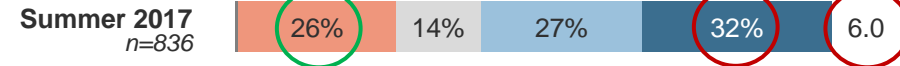


Reasonableness of Water Rates

All Tacoma Water Customers - Phone



All Tacoma Water Customers - Web



Q13. Using the scale from a 0 to 10 scale where a 0 means you receive a very poor value and a 10 means you receive a very good value, how would you rate the value you receive from Tacoma Water in terms of the water service you receive

RATESW. In general, to what extent do you think the rates you pay for the water service you receive from Tacoma Water are reasonable?

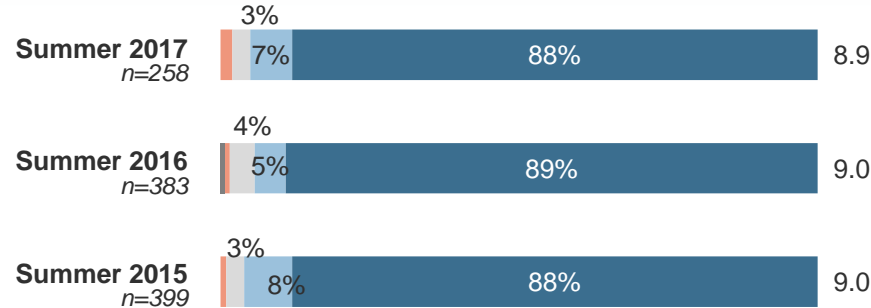
Please answer using a scale from 0 to 10 where a 0 means you think they are extremely unreasonable and a 10 means you think they are extremely reasonable.

↑↓ Indicate significant differences between the current wave and previous waves. ● / ○ circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

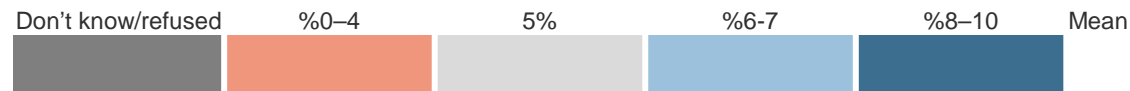
Reliability of Water Service



All Tacoma Water Customers - Phone

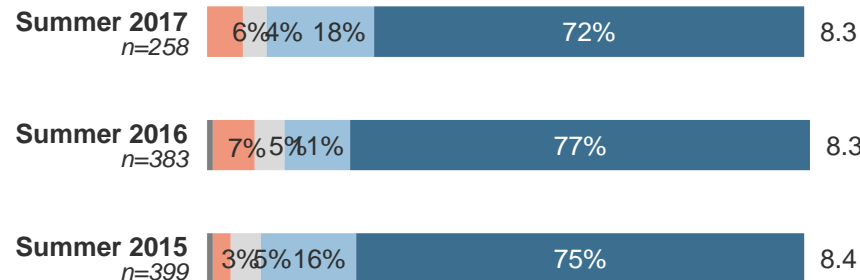


All Tacoma Water Customers - Web



Water Quality

All Tacoma Water Customers - Phone



All Tacoma Water Customers - Web



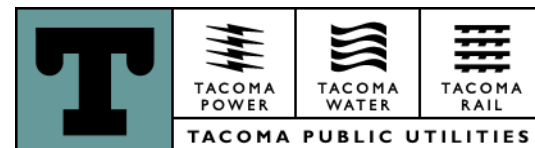
How would you rate Tacoma Water's performance with regard to...?
WTRREL. Overall reliability of water service. WQUAL. The quality of the water overall

↑↓ Indicate significant differences between the current wave and previous waves. ● / ● circles indicate significantly higher/lower percentages for web results versus the 2017 phone results.

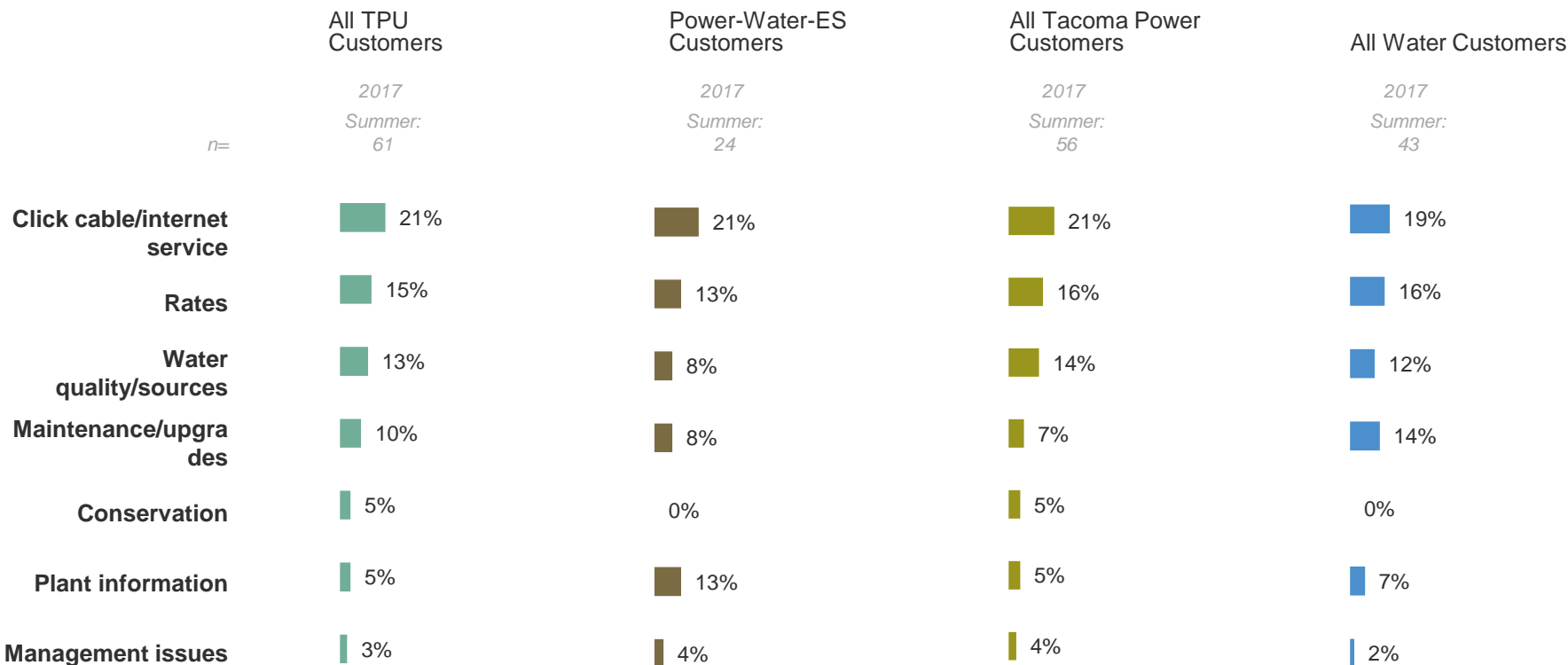
Newsletter, Website, Media, and Advertising Awareness

TPU News Story Content – Past Three Months

Phone



Content of News Story



Opinion of TPU following news stories...



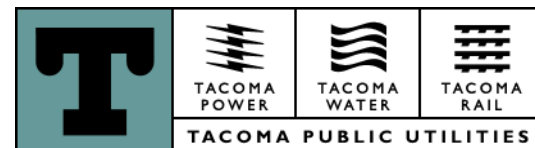
DK/REF Negative Neutral Positive

MED_OE. What were these news stories about?

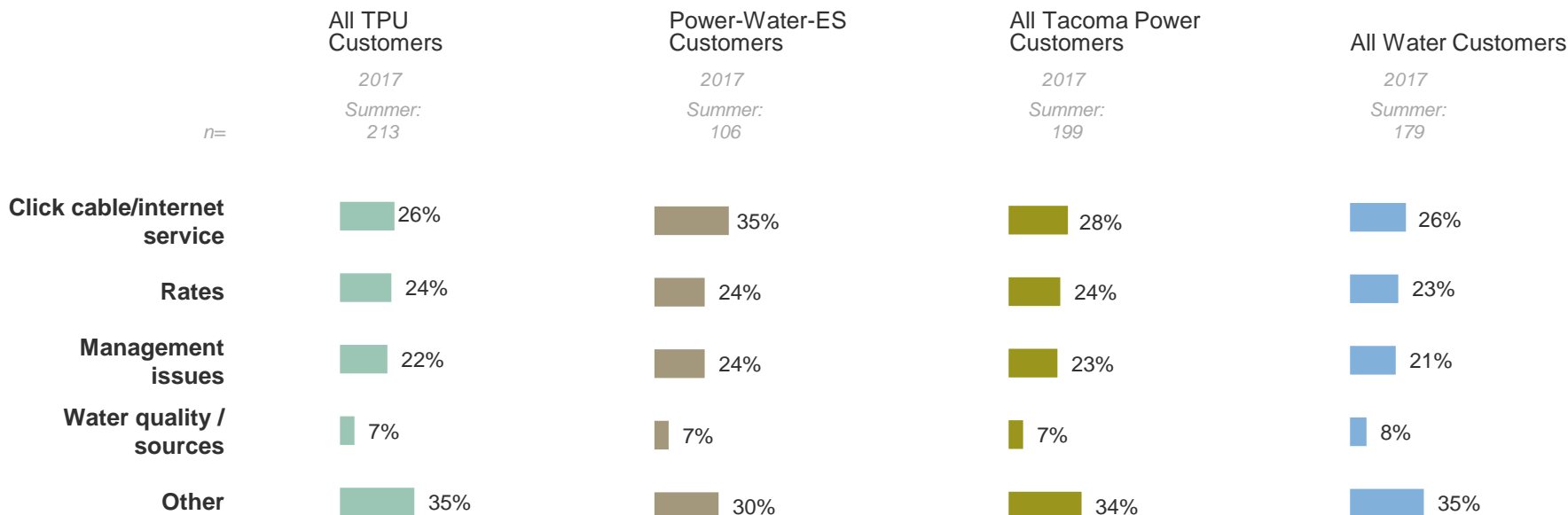
OPINION. Overall, have the news stories you've seen or heard over the past 3 months about Tacoma Public Utilities made you feel...?

TPU News Story Content – Past Three Months

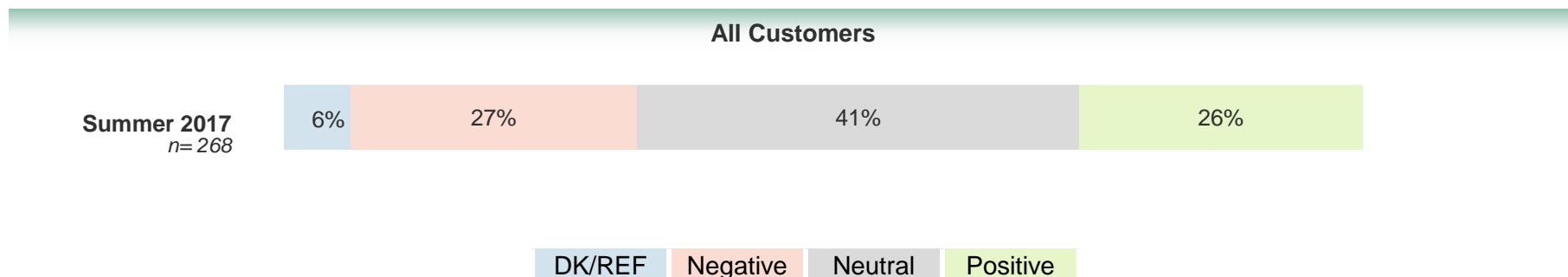
Web



Content of News Story



Opinion of TPU following news stories...



MED_OE. What were these news stories about?

OPINION. Overall, have the news stories you've seen or heard over the past 3 months about Tacoma Public Utilities made you feel...?

Market Strategies National Energy Utility Benchmarking

Market Strategies National Energy Utility Benchmarking

Residential Electric and Electric-Gas Utility Customers

NOTE: TPU results exclude Water-only customers.



TPU 2017 Residential Benchmarking

Mean scores

	Phone			Web		
	Mean	Rank	Quartile	Mean	Rank	Quartile
Promptly Fixing Customer Problems	8.2	1	1	7.7	17	1
Accessible By Phone During Outage	8.0	3	1	7.5	19	1
Being A Company You Can Trust	8.1	4	1	7.5	38	2
Being a Good Corporate Citizen in the Communities Served	8.0	4	1	7.4	17	1
Being Easy To Do Business With	8.3	7	1	7.8	33	2
Being Well-Managed	7.7	13	1	7.3	52	3
Having Bills That Are Easy To Understand	8.3	11	1	7.8	53	3
Having Friendly And Courteous Employees	8.7	5	1	8.0	20	1
Having Knowledgeable And Well-Trained Employees	8.5	4	1	7.9	18	1
Helping Customers Use Energy Safely	8.4	3	1	7.7	15	1
Letting You Know What Caused Outage	7.4	3	1	7.0	15	1
Overall Favorability	7.8	36	2	7.6	58	3
Overall Satisfaction	8.3	5	1	7.9	34	2
Programs to Help Customers Use Energy More Efficiently	7.6	14	1	7.3	43	2
Providing Accurate Bills	8.3	14	1	7.9	56	3
Providing Reliable Service	9.1	2	1	8.5	14	1
Reasonableness of Electric Rates*	7.0	48	2	6.4	83	4
Reliable Estimates of Power Restored	8.2	1	1	7.6	16	1
Restoring Electric Service When Outages Occur	8.6	2	1	8.1	13	1
Satisfaction with Most Recent Call	8.0	33	2	7.7	59	3
Value of Electric Product Delivered*	8.3	4	1	7.5	48	3

*Measures are asked on a 0-10 scale while the database asks the measures on a 1-5 scale, only total positive ratings are comparable and currently shown.

Tacoma Public Utilities

Key Recommendations

Key Recommendations

1) Enhance rate communications

- > Increase channels for broader customer and market reach
- > Review rate communications best practices; revise messages; consider conducting message testing among customers
- > Clarify differences between Water and Environmental Services, including rates
- > Highlight conservation/behavioral measures
- > Describe how TPU controls costs
- > Increase low income assistance communications
- > Increase Budget Billing enrollment

2) Continue to improve outage communications

3) Increase communications for new customers, including possible welcome kit