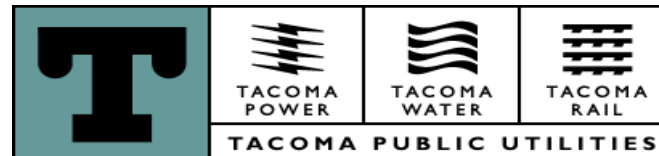


Serving our customers

Residential Products & Services Survey

September 2020

We provide services that are vital to our quality of life.



Research Objectives

The Tacoma Public Utilities Products and Services Study was conducted to gauge:

- Covid-19 concerns
- Desired level of engagement with TPU
- Interest in energy profile program
- Generation profile awareness and priorities
- Attitudes and preferences regarding EVs
- Payment and customer service channel preferences

Methodology

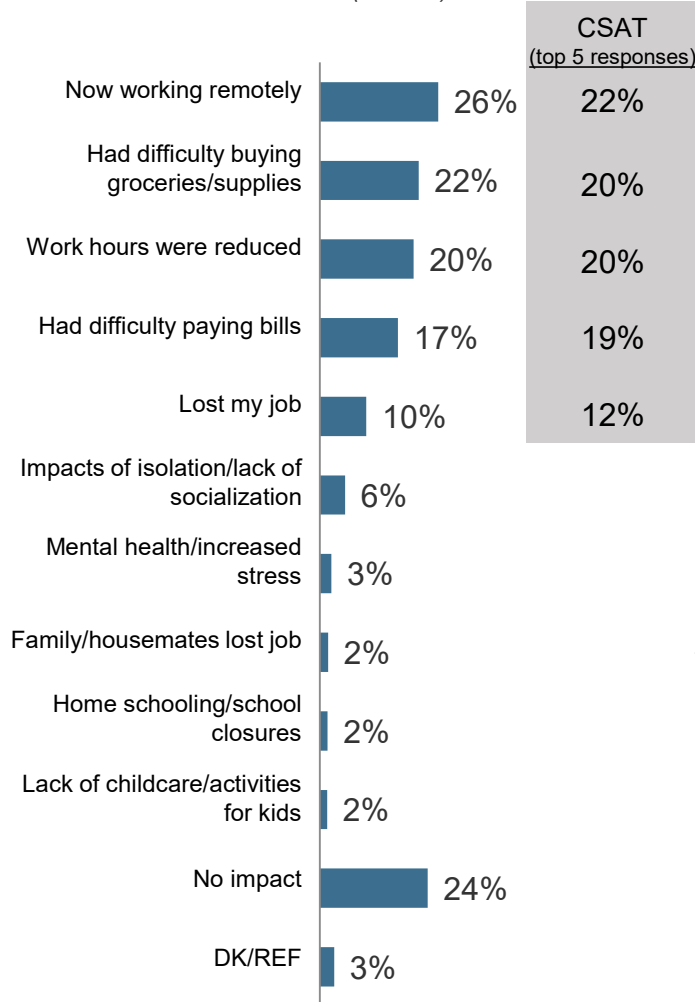
- An online survey was conducted among Tacoma Public Utilities Residential customers from May 26th to May 29th, 2020:
 - TPU Residential customers with email addresses on file in TPU's customer database were invited to take the survey via an email invitation with a link to the survey.
 - TPU was identified as the study sponsor.
 - As an incentive to participate in the survey, respondents were offered the opportunity to enter a drawing for one of six Visa gift cards offered by Escalent.
- Respondent screening criteria: TPU Residential customer; adult age 18+; respondent and family members not employed by City of Tacoma, TPU, or another utility, an energy company, an advertising/public relations/marketing company, or the media.
- Sample size: n=1,002 completed surveys
- The average length of time to complete the self-administered online survey was 13 minutes.

COVID-19 Topics

Impact of COVID-19 on TPU Customers

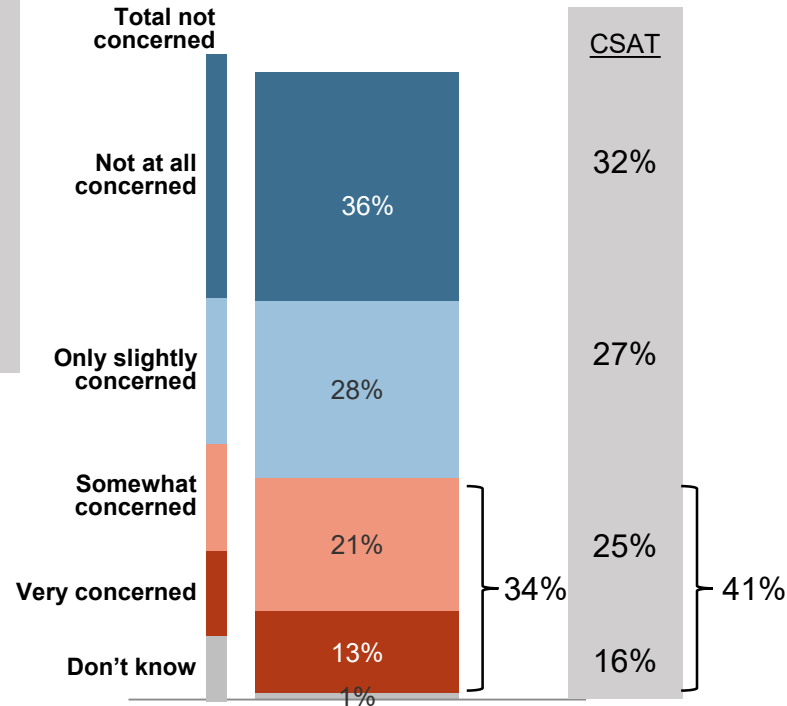
Impact of COVID-19 on Customers

(n=1002)



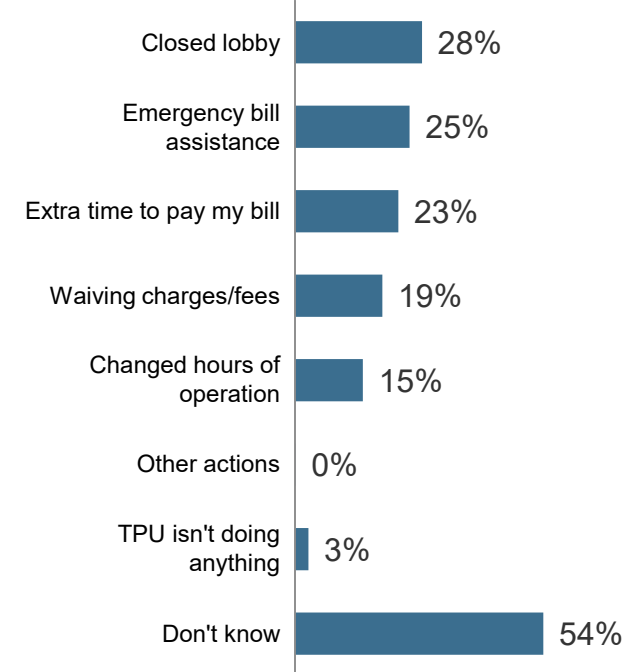
Concern With Paying Basic Household Bills in 2020

(n=1002)



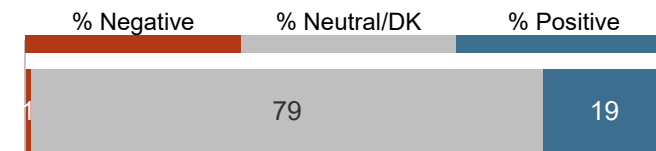
Aware of Actions TPU Has Taken in Response to COVID-19

(n=1002)



How COVID-19 Response has Impacted Opinion of TPU

(n=1002)



COVID-19 Personal Impact and Concern with Paying Basic Household Bills in 2020

By Own/Rent, Education Level, Household Income

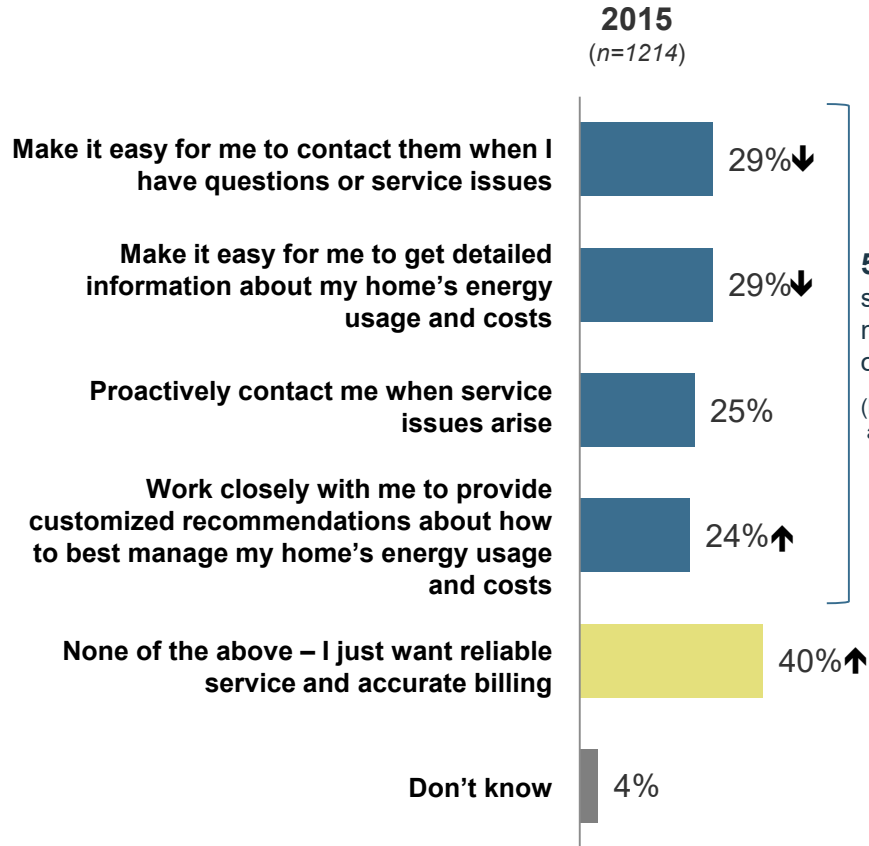


COVID-19 Impact and Bill Concerns	Total	Own or Rent Home		Education			Income			
		Own/ Buying A	Rent/ Lease B	H. S. or less C	Some coll./ voc school D	Coll. grad/ post grad E	Less than \$50,000 F	\$50,000 to \$74,999 G	\$75,000 to \$99,999 H	\$100,000 or more I
	n= 1002	706	285	124	369	471	232	164	160	243
Concern with Paying Basic Household Bills in 2020...										
Total concern with paying bill	34%	28%	49% ^A	44% ^E	42% ^E	25%	60% ^{GHI}	38% ^{HI}	25% ^I	15%
Total not concerned with paying bill	65%	71% ^B	50%	54%	57%	74% ^{CD}	39%	61% ^F	73% ^{FG}	85% ^{FGH}
Personal Impact from COVID-19...										
Now working remotely	26%	26%	25%	10%	15%	39% ^{CD}	12%	27% ^F	34% ^F	33% ^F
Had difficulty buying groceries/supplies	22%	18%	28% ^A	25% ^E	27% ^E	16%	34% ^{GHI}	21% ^I	19% ^I	10%
Work hours were reduced	20%	17%	27% ^A	24%	23%	17%	27% ^I	24%	20%	16%
Had difficulty paying bills	17%	12%	28% ^A	27% ^E	22% ^E	10%	35% ^{GHI}	18% ^{HI}	10%	6%
Lost my job	10%	7%	17% ^A	14%	11%	9%	15% ^{HI}	12%	7%	7%
Impacts of isolation/lack of socialization	6%	6%	3%	2%	4%	8% ^{CD}	6%	2%	7% ^G	5%
Mental health/increased stress	3%	3%	2%	2%	3%	2%	4%	2%	5%	1%
Family/housemates lost job	2%	2%	2%	2%	2%	2%	2%	1%	1%	3%
Home schooling/school closures	2%	2%	1%	—	2%	2%	2%	2%	1%	1%
Lack of childcare/activities for kids	2%	2%	0%	1%	2%	1%	2%	2%	2%	1%
Furloughed/family members furloughed	1%	1%	1%	1%	2% ^E	0%	0%	1%	1%	2%
Working harder/longer hours	1%	1%	1%	2%	1%	1%	0%	1%	2%	2%
Reduced pay/family members lost income	1%	1%	0%	1%	0%	1%	0%	—	2%	1%
Myself or a household member tested positive for COVID-19	1%	1%	2%	—	1%	1%	0%	2%	1%	—
Unable to have routine/necessary medical care	1%	1%	1%	—	1%	1%	1%	1%	1%	0%
Front line/essential worker	1%	1%	1%	1% ^E	2% ^E	—	0%	2% ^I	1%	—
Trouble receiving benefits/unemployment	1%	1%	1%	—	1%	1%	—	1%	1%	1%
Transportation issues	1%	0%	1%	3% ^{DE}	0%	0%	2% ^I	—	—	—
Business owned impacted	0%	1%	—	1%	—	1%	—	1%	1%	1%
Other impacts	4%	4%	4%	2%	4%	5%	6%	3%	5%	2%
No impact	24%	27% ^B	15%	26%	24%	22%	21%	22%	21%	29% ^F
DK/REF	3%	3%	3%	4%	4%	2%	4% ^I	2%	5% ^I	1%

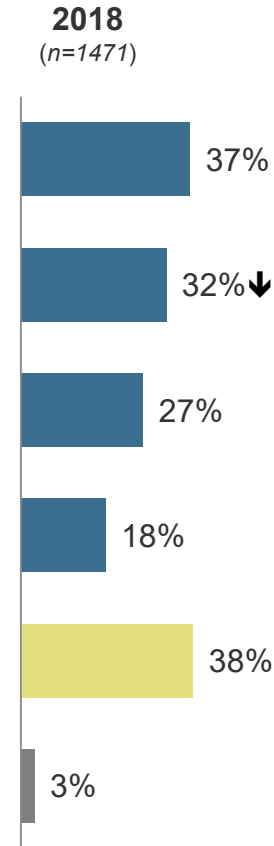
Desired Relationship and Home Energy Use Profile

Desired Type of Relationship with TPU

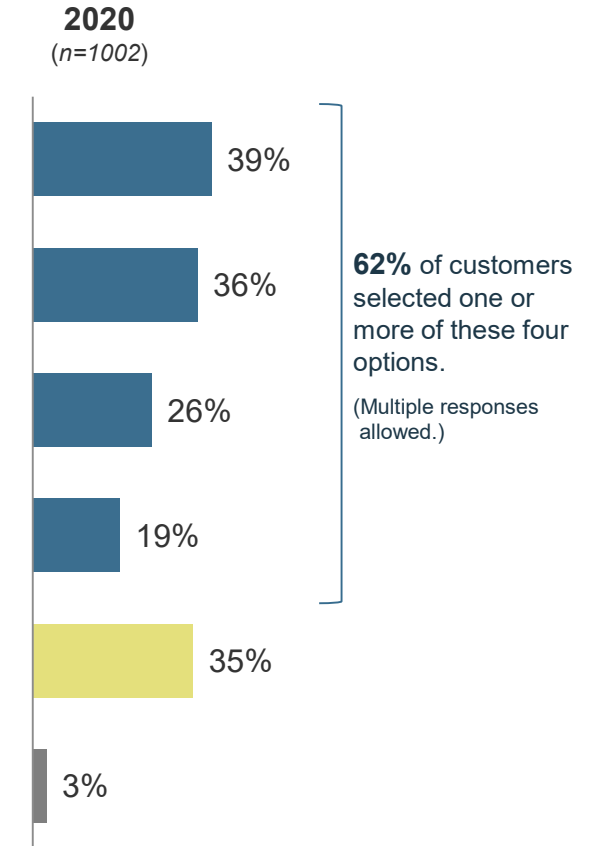
Desired Type of Relationship with Tacoma Power



Desired Type of Relationship with TPU



Desired Type of Relationship with TPU



↓
56% of customers selected one or more of these four options.
(Multiple responses allowed.)

↓
59% of customers selected one or more of these four options.
(Multiple responses allowed.)

↓
62% of customers selected one or more of these four options.
(Multiple responses allowed.)

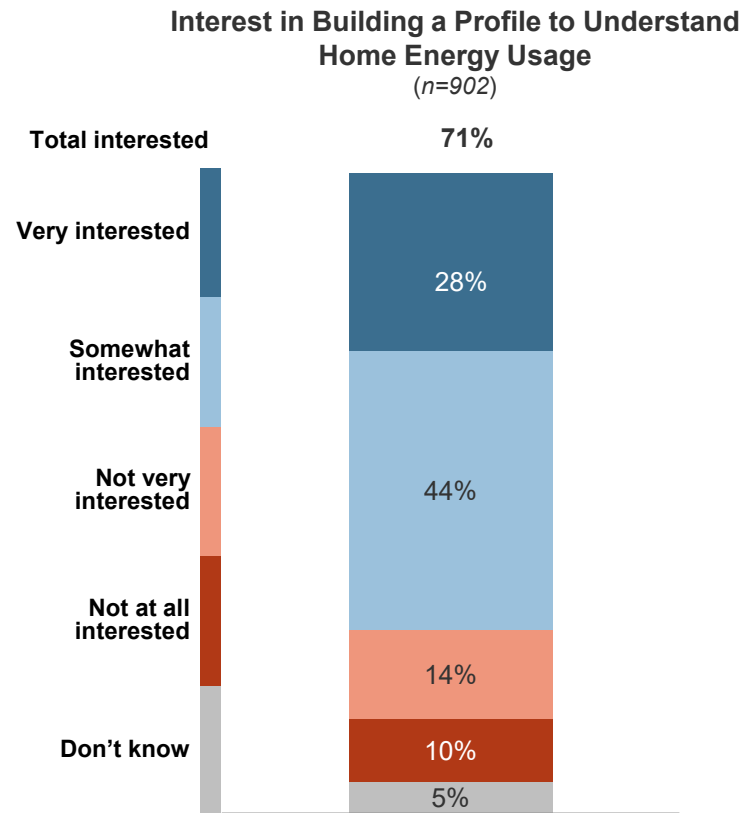
Desired Type of Relationship with TPU

By Own/Rent, Education Level, Household Income



Desired Type of Relationship with TPU % would like	Total	Own or Rent Home		Education			Income			
		Own/ Buying	Rent/ Lease	H. S. or less	Some coll./ voc school	Coll. grad/ post grad	Less than \$50,000	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 or more
		A	B	C	D	E	F	G	H	I
	n= 1002	706	285	124	369	471	232	164	160	243
Make it easy for me to contact them when I have questions or service issues	39%	41%	36%	31%	40%	42% C	40%	41%	35%	45%
Make it easy for me to get detailed information about my home's energy usage and costs	36%	40% B	28%	23%	32% C	45% CD	29%	37%	34%	47% FH
Proactively contact me when service issues arise	26%	30% B	18%	14%	21%	34% CD	16%	24%	23%	36% FGH
Work closely with me to provide customized recommendations about how to best manage my home's energy usage and costs	19%	22% B	12%	11%	17%	22% C	18%	21%	17%	21%
None of the above - I just want reliable service and accurate billing	35%	32%	42% A	49% DE	35%	31%	39%	31%	36%	30%
Don't know	3%	2%	5% A	4%	3%	3%	4%	3%	2%	2%

Interest in Building a Profile to Understand Home Energy Usage



Interest in Building a Profile to Understand Home Energy Usage	Total	Own or Rent Home		Education			Income			
		Own/ Buying A	Rent/ Lease B	H. S. or less C	Some coll./ voc school D	Coll. grad/ post grad E	Less than \$50,000 F	\$50,000 to \$74,999 G	\$75,000 to \$99,999 H	\$100,000 or more I
	n= 902	614	279	115	337	417	224	152	142	213
Total Interested	71%	75% ^B	65%	60%	69%	80% ^{CD}	67%	78% ^F	78% ^F	76% ^F

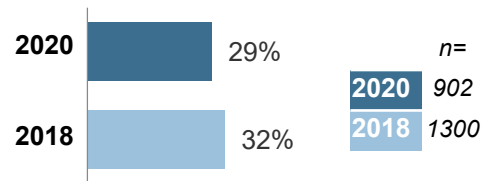
Interest in Building a Profile to Understand Home Energy Usage	Total	Customer Type				
		All Services A	Power-only SFH B	Power-only MFH C	Water-only D	Power-water only E
	n= 902	390	207	215	—	90
Total Interested	71%	77% ^{BC}	68%	66%	—	76%

Generation and TPU Prioritization

Hydroelectric and TPU Prioritization

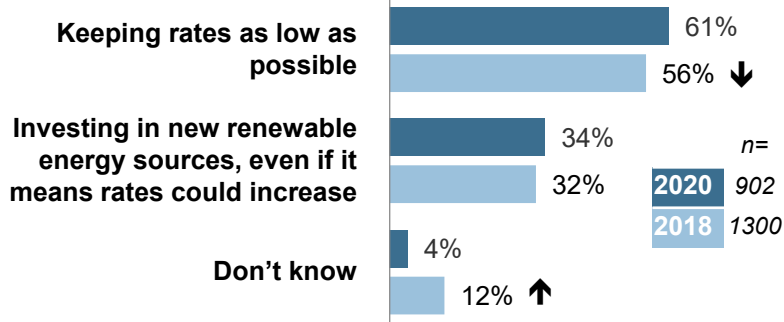


Awareness that 96% of Electricity Generated by Tacoma Power is Carbon Free (among Power customers)



Awareness that 96% of generation is carbon free	Total	Own or Rent Home		Education			Income			
		Own/ Buying	Rent/ Lease	H. S. or less	Some coll./ voc school	Coll. grad/ post grad	Less than \$50,000	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 or more
		A	B	C	D	E	F	G	H	I
	n= 902	614	279	115	337	417	224	152	142	213
Yes	29%	31%	25%	24%	31%	28%	30%	28%	29%	29%

Most Important Issue for TPU to Prioritize (among Power customers)

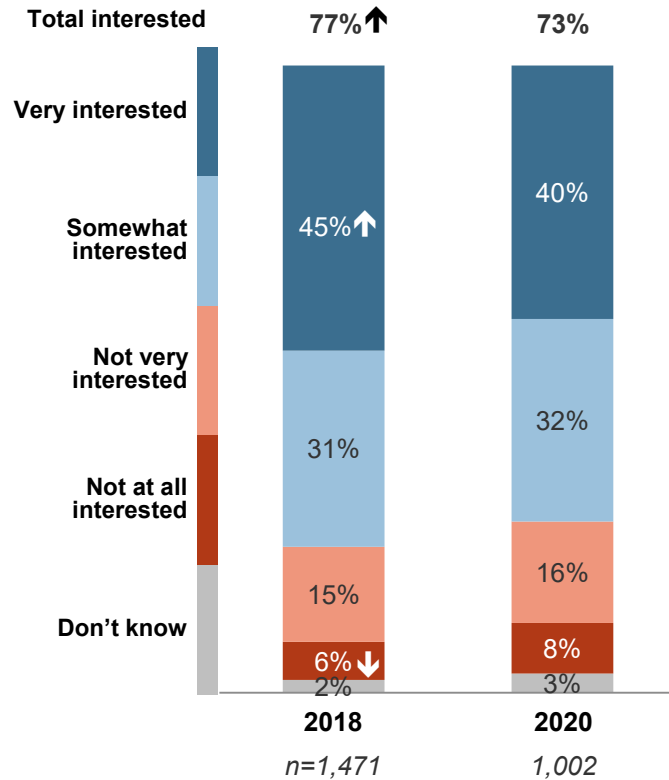


Most important issue for TPU to prioritize	Total	Own or Rent Home		Education			Income			
		Own/ Buying	Rent/ Lease	H. S. or less	Some coll./ voc school	Coll. grad/ post grad	Less than \$50,000	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 or more
		A	B	C	D	E	F	G	H	I
	n= 902	614	279	115	337	417	224	152	142	213
Keeping rates as low as possible	61%	61%	62%	79% ^{DE}	63% ^E	54%	66% ^I	60%	61%	51%
Investing in new renewable energy sources, such as solar and wind, even if it means rates could increase	34%	35%	33%	17%	34% ^C	41% ^C	29%	34%	37%	46% ^{FG}
Don't know	4%	4%	5%	4%	3%	5%	5%	5%	3%	3%

Billing Options

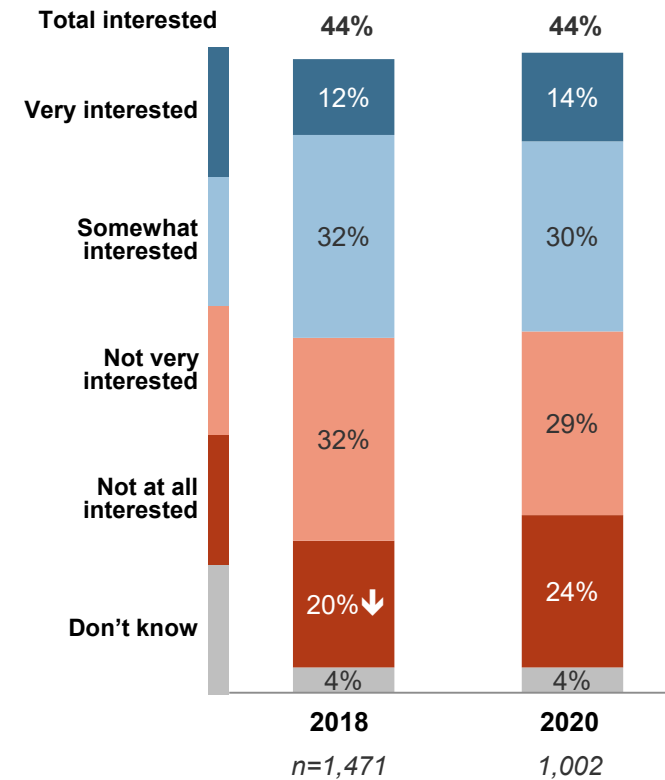
Interest in Billing Options

Interest in Selecting a Payment Due-date



The Prepayment Program was described in the survey as “a program that would allow customers to pre-pay for their electric service. Pre-payment could be for customers who want to limit how much they spend on electricity, or those who want to avoid getting behind on paying their electricity bill.”

Interest in Bill Pre-payment



BP1. What is your level of interest in being able to select a payment due date that works best for you?
 BP2. Tacoma Power is also considering a program that would allow customers to pre-pay for their electric service. Pre-payment could be for customers who want to limit how much they spend on electricity, or those who want to avoid getting behind on paying their electricity bill. How likely would you be to enroll in a prepayment program for your home's electricity bill if this was offered by Tacoma Power? Would you..?
 ↑↓ Indicate significant differences between 2020 and 2018.

Interest in Billing Options

By Own/Rent, Education Level, Household Income



Interest in bill pre-payment and selecting a due-date	Total	Own or Rent Home		Education			Income			
		Own/ Buying	Rent/ Lease	H. S. or less	Some coll./ voc school	Coll. grad/ post grad	Less than \$50,000	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 or more
		A	B	C	D	E	F	G	H	I
	n= 1002	706	285	124	369	471	232	164	160	243
Total interested in selecting a due-date	73%	68%	82% ^A	69%	78% ^C 78% ^E	70%	80% ^{HI}	78% ^I	69%	64%
Total Interested in pre-payment	44%	39%	56% ^A	54% ^E	50% ^E	37%	57% ^{HI}	50% ^I	42%	36%

Interest in bill pre-payment and selecting a due-date	Total	Customer Type				
		All Services	Power-only SFH	Power- only MFH	Water-only	Power-water only
		A	B	C	D	E
	n= 1002	390	207	215	100	90
Total interested in selecting a due-date	73%	70%	73%	79% ^{AD}	67%	73%
Total Interested in pre-payment	44%	41%	45% ^D	49% ^{AD}	32%	54% ^{AD}

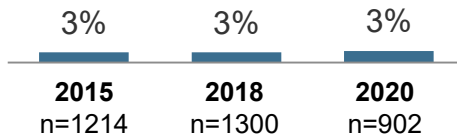
BP1. What is your level of interest in being able to select a payment due date that works best for you?

BP2. Tacoma Power is also considering a program that would allow customers to pre-pay for their electric service. Pre-payment could be for customers who want to limit how much they spend on electricity, or those who want to avoid getting behind on paying their electricity bill. How likely would you be to enroll in a prepayment program for your home's electricity bill if this was offered by Tacoma Power? Would you..?

Electric Vehicles

Electric Vehicle / Plug-in Hybrid Electric Vehicle Ownership

Currently Own or Lease an EV/PHEV (%Yes, among Tacoma Power Customers)



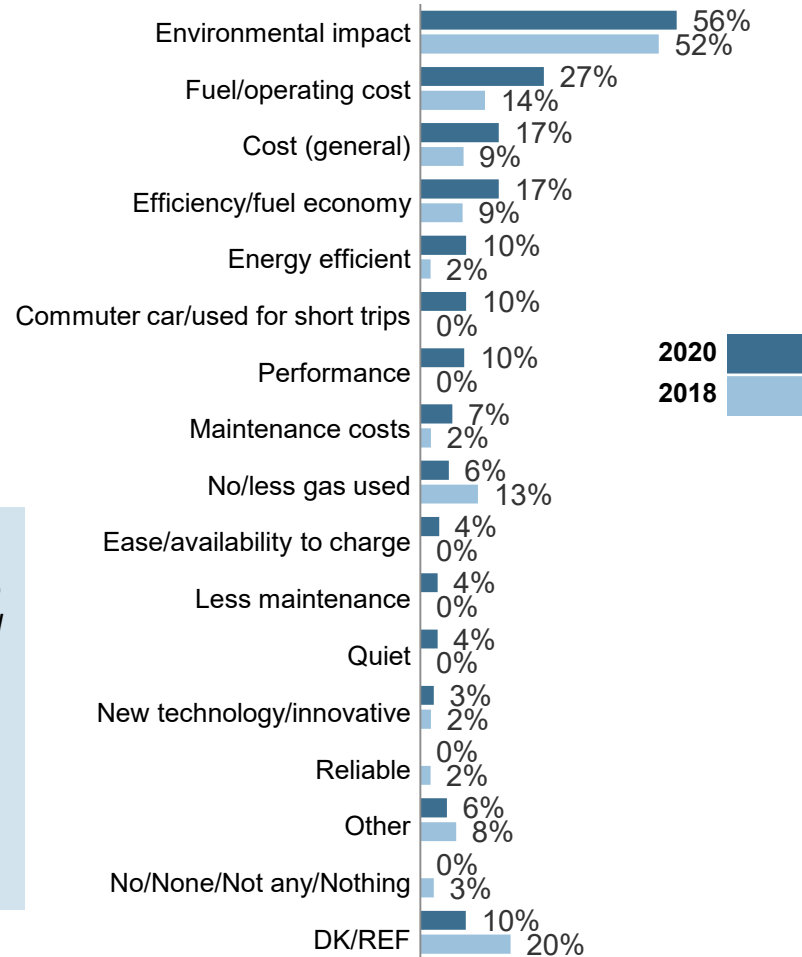
Reasons for purchasing an EV/PHEV:

“Low maintenance and operating costs, very affordable used vehicle prices, reducing my carbon footprint, access to charging at work and home.”

“Offsetting carbon footprint. Short commute in our household allowing a fully electric vehicle to fully meet our needs. Not being dependent on fluctuating gasoline prices.”

“Mainly price. The minimal cost of maintenance and “fuel.” A BEV just made more savings.”

Reasons for Purchasing an EV/PHEV (unprompted, among those who own a EV/PHEV) (2018 n=46; 2020 n=31)



What Non-EV Owners Should Know About Owning an EV (among those who own a EV/PHEV):

“They need to know how great it is to not have emissions, enjoy premium parking, and receive tax rebate. Vehicle is also extremely quiet during drive. Low maintenance.”

“Great for the environment. Cars are quiet and peppy (fun to drive).”

“Filling up the tank is as easy as plugging in overnight, and used EVs are a great value. If you can, buy more range than you think you need though, because the heater/ac sucks a lot of power.”

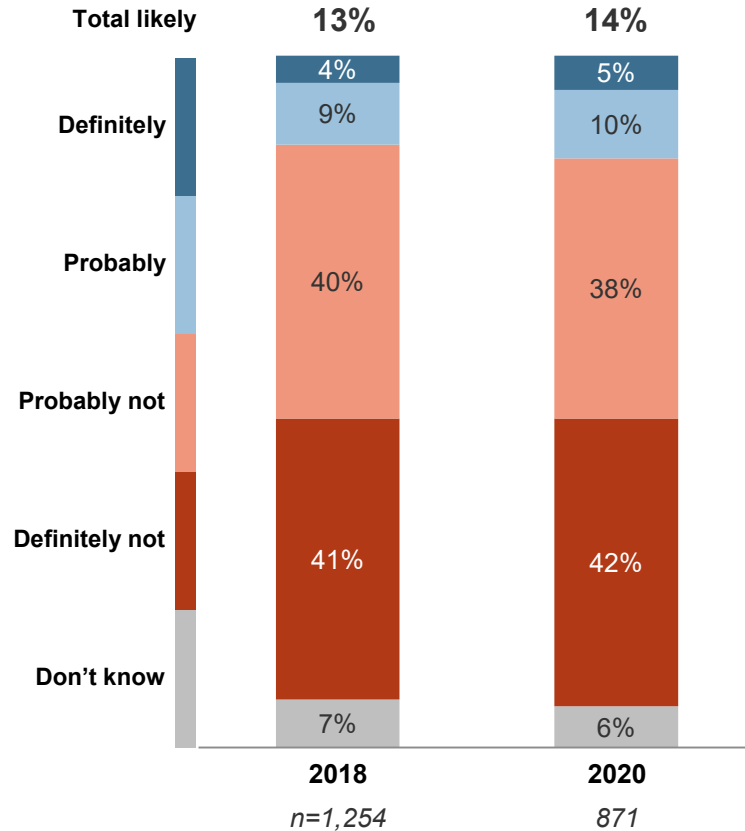
“There is no affordable charging options outside your home, if you have to travel beyond your vehicles range stay with fuel.”

“It's more fun, more convenient, you'll quickly realize how unpleasant gas stations are, and it replaces a major variable monthly cost (gas) with a tiny one.”

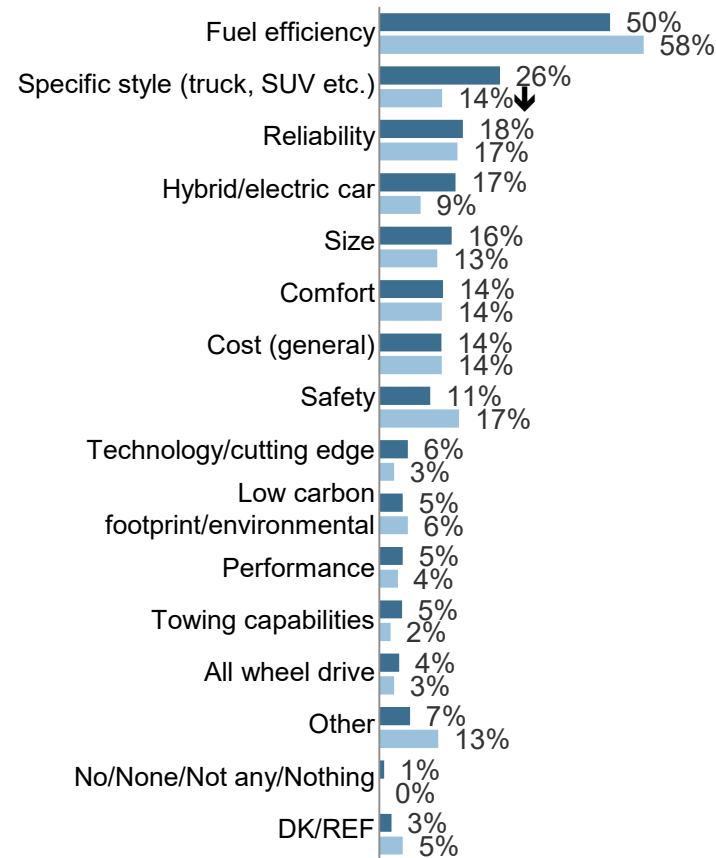
“They cost more money in the long run since user maintenance is impossible, and the batteries only last 10 years or so, and cost thousands to replace. They don't really save you money. As long as our power comes from Water and Solar then they do save the environment. Electric vehicles powered by Coal plants aren't helping anyone though.”

Likelihood to Purchase or Lease a Vehicle Within the Next 12 Months, Features Sought, Sources for Info

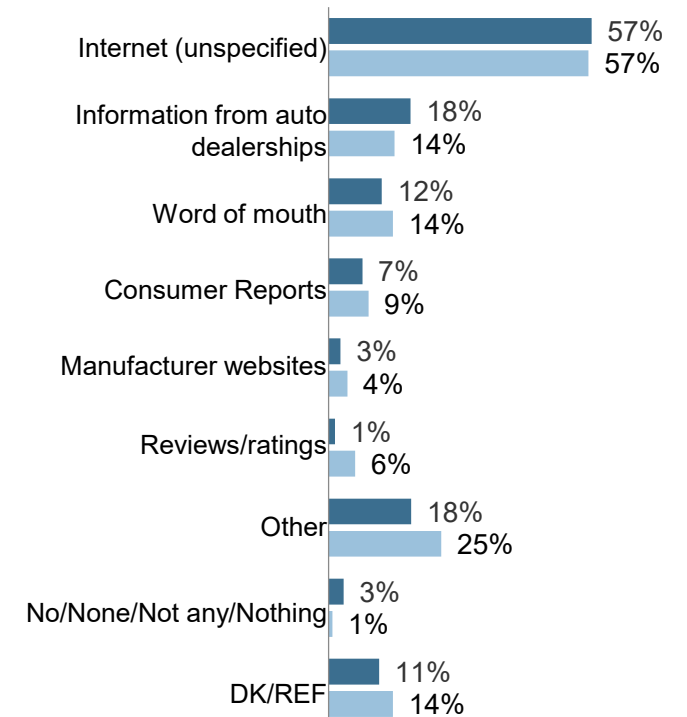
Likelihood to Purchase or Lease a Vehicle Within 12 Months
(among non-EV owners)



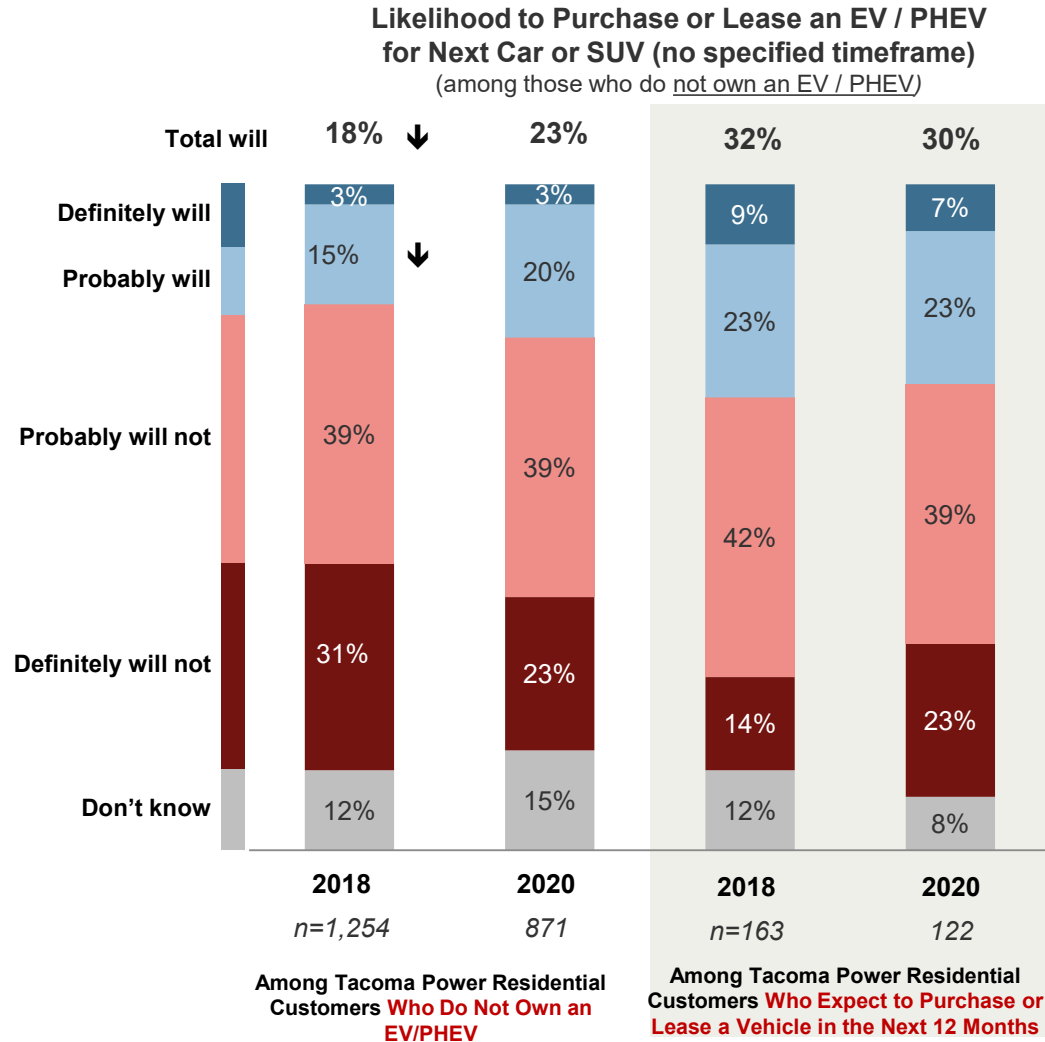
Features Sought in New Vehicle
(among those likely to acquire in next 12 months)
(2018 n=167; 2020 n=126)



Sources Used for Information
(among those likely to acquire in next 12 months)
(2018 n=167; 2020 n=126)



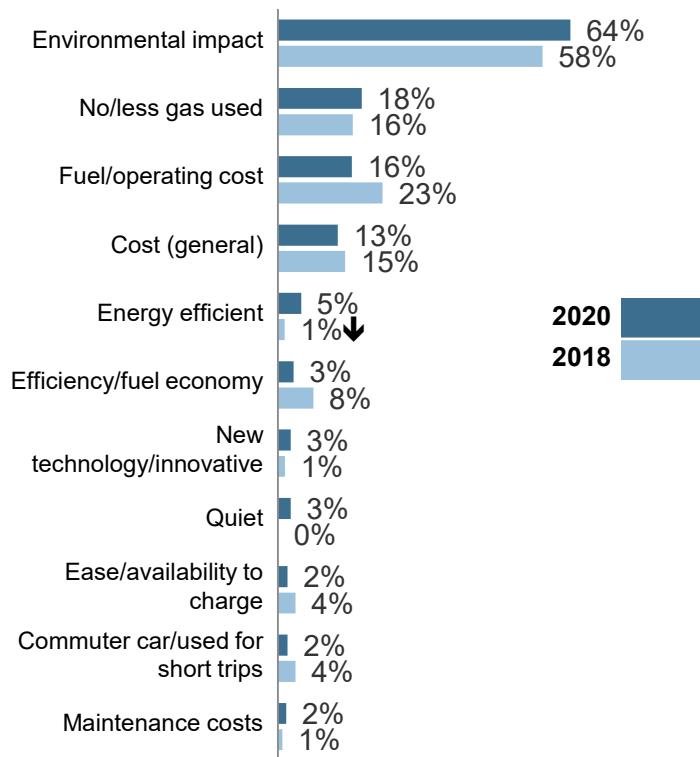
Likelihood to Purchase or Lease an EV / PHEV as Next Vehicle



Reasons Would / Would Not Purchase or Lease an EV/PHEV as Next Car or SUV and Utility Programs

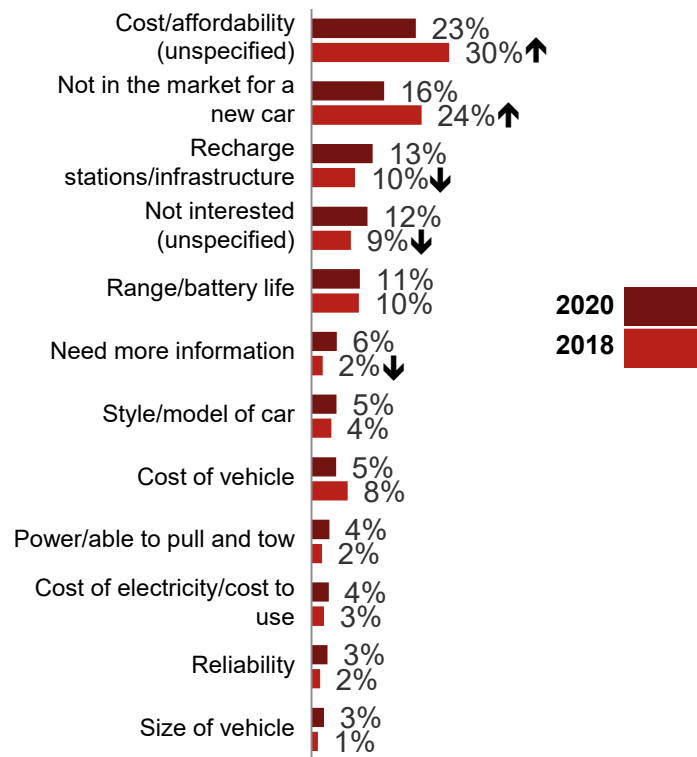
Main Reasons Would Purchase an Electric Vehicle

(unprompted, among customers likely to purchase an EV as their next vehicle; 2018 n=232; 2020 n=207)



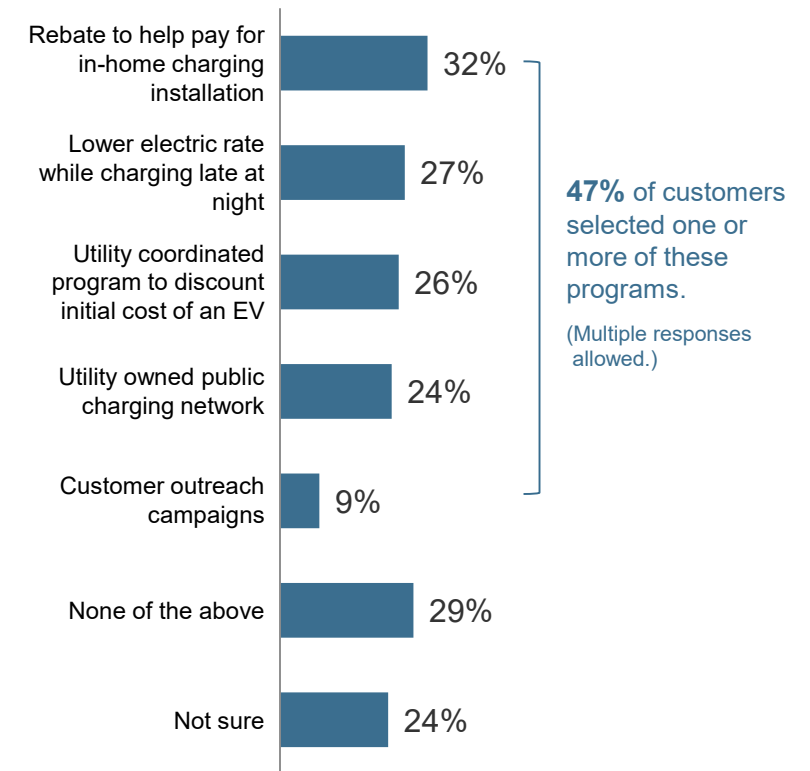
Main Reasons Would Not Purchase an Electric Vehicle

(unprompted, among customers unlikely to purchase an EV as their next vehicle; 2018 n=867; 2020 n=532)



Utility Programs that Would Encourage EV Purchase

(among customers who do not own an EV; n=871)



Preferred Channels

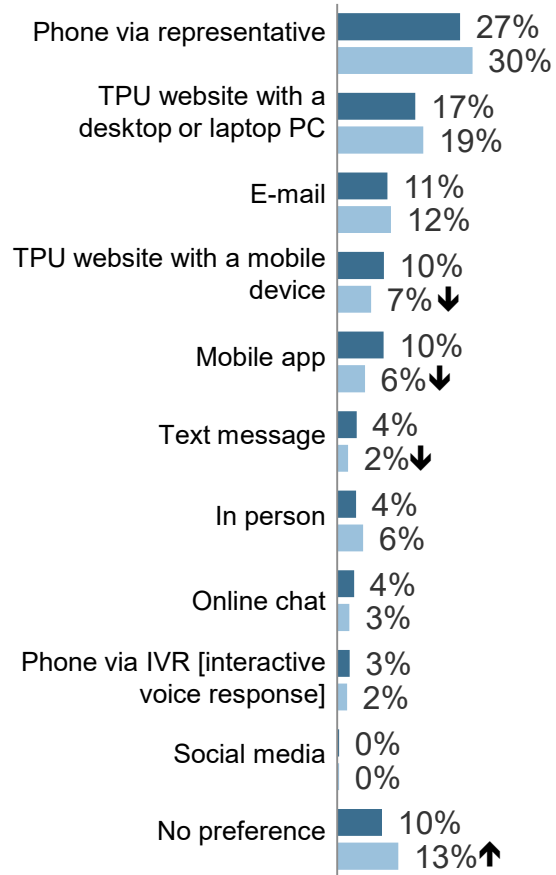
Preferred Channel to Interact with TPU



2020
2018

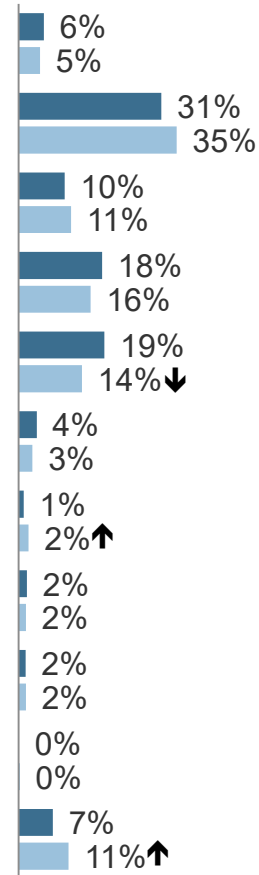
Moving into a New Residence

(2018 n=1471; 2020 n=1002)



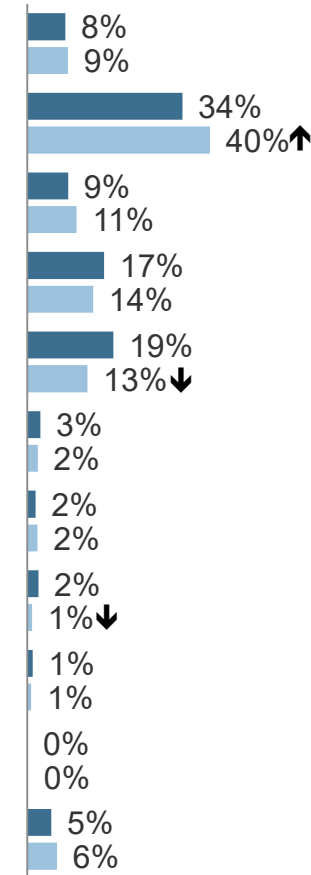
Pay Your Utility Bill

(2018 n=1471; 2020 n=1002)



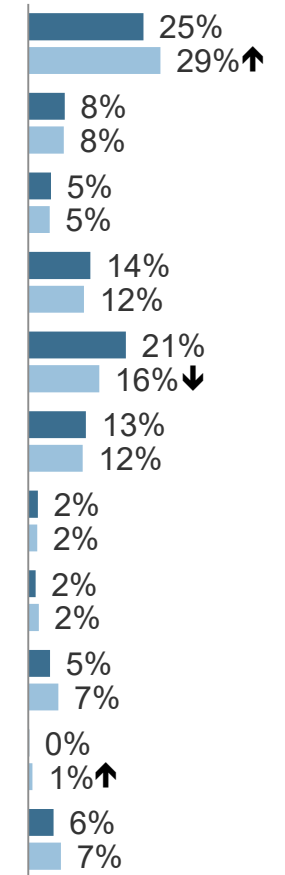
Manage Your Account

(2018 n=1471; 2020 n=1002)



Report an Outage

(2018 n=1471; 2020 n=1002)

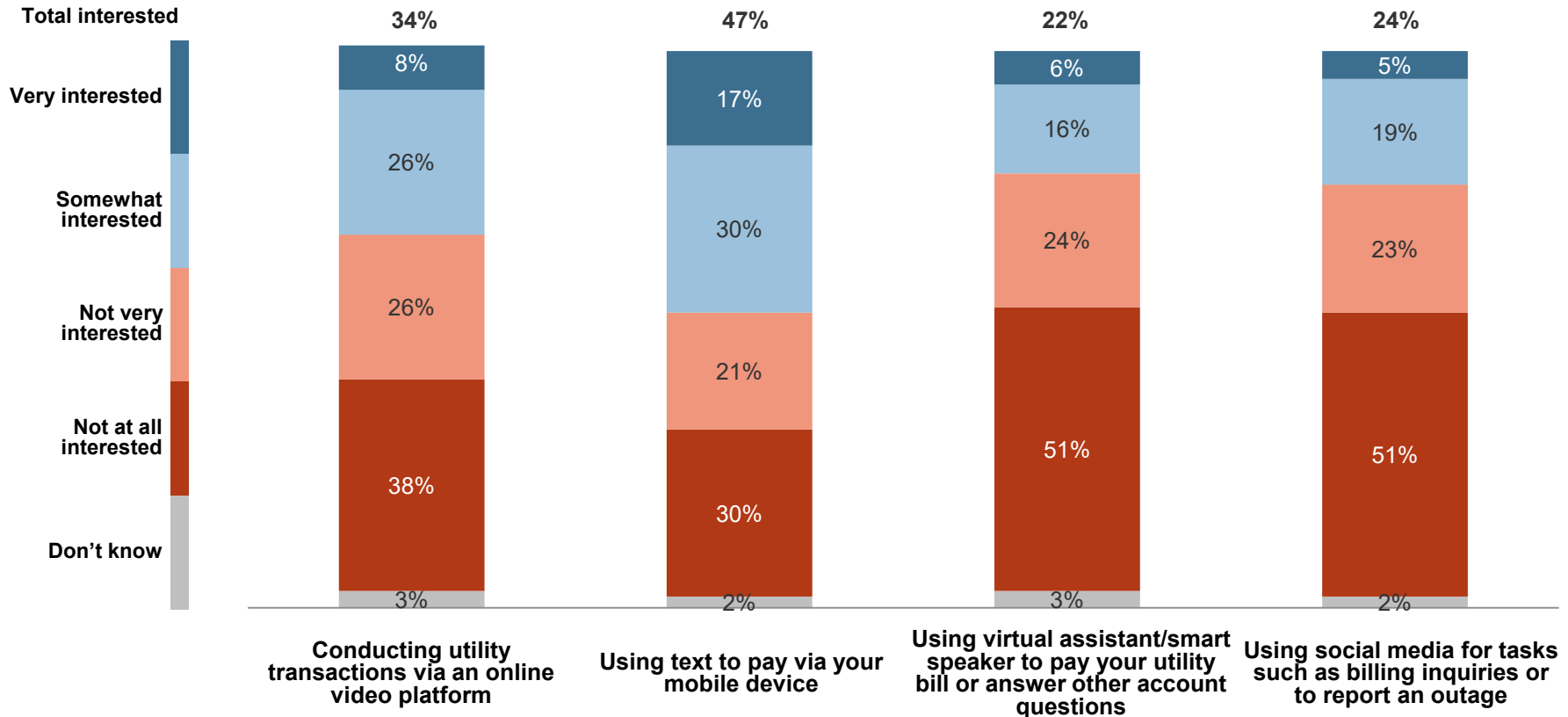


PRFCHAN1. Moving into a new residence/moving out
 PRFCHAN2. Pay your utility bill
 PRFCHAN3. Manage your account (set billing preferences – paper vs online, budget billing, access electricity/water usage)
 PRFCHAN4. Report an outage
 ↑↓ Indicate significant differences between 2020 and 2018.

Virtual Communication Channels

68% of customers have used an online video platform to connect with people or businesses in the past month

Interest in Virtual Communication Channels
(n=1002)



OVD1. Have you used an online video platform (i.e., Zoom or Skype) to connect with people or businesses in the past month?
 OVD2. Conducting utility transactions (e.g. transfer service, billing payment inquiries, etc.) via an online video platform?
 OVD3. Using text to pay via your mobile device?
 OVD4. Using virtual assistant/smart speaker (i.e. Google assistant, Alexa) to pay your utility bill or answer other account questions?
 OVD5. Using social media (i.e. Facebook Messenger) for tasks such as billing inquiries or to report an outage?