

# TOU PILOT EVALUATION: CUSTOMER IMPACTS / SAVINGS

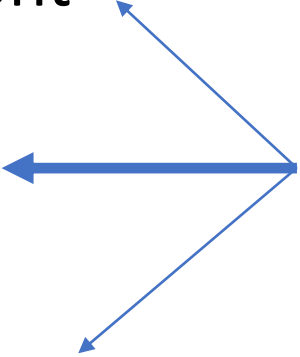
Preliminary Results

3/31/2023

# TOU Pilot Goals

(established by BL, LBAC and MLB)

- 1) Align customers savings from reduced energy use with savings for Belmont Light
- 2) Support strategic electrification
- 3) Protect low-income customers
- 4) Support energy efficiency and solar
- 5) Ensure Belmont Light revenue sufficiency and stability
- 6) Provide for easy implementation



Customer Impacts (savings) results address Goal #2 and parts of Goal #1 and Goal #4.

# Data Used

- 15 min interval meter readings starting 2/7/22 0:00 and ending 2/8/23 0:00 (366 days – follows billing cycles)
- 147 customer records, however 7 were incomplete and removed. 140 full records used

Number of Customers In This Analysis	
With Technology	102
No Technology	38
Total	140

Technology	Count
No Tech	38
EV, Solar	18
EV	17
Solar	17
ASHP	14
ASHP, EV, Solar	13
ASHP, Solar	10
ASHP, EV	8
EV, Solar, Battery Storage	2
EV, Solar, Geothermal, Battery Storage	1
Solar, Battery Storage	1
Solar, Geothermal	1

# Impact of being on TOU Rate vs. Flat Rate

Customer Tech?	No. Customers	Avg Impact Per Customer (Summer)		Avg Impact Per Customer (Other Months)		Avg Impact Per Customer (Yearly Total)	
No Tech	38	\$53.89	12.1%	-\$111.29	-12.2%	-\$57.40	-4.2%
With Tech	102	\$7.81	1.3%	-\$183.91	-13.3%	-\$176.09	-8.8%
Total	140	\$20.32	3.6%	-\$164.20	-13.1%	-\$143.87	-7.9%

- Negative ('-') value means savings for customer from being on TOU
- Positive value means customer paid more on TOU rate
- Initial observations:
  - Over the year both the 'no tech' and 'tech' customers saved money on average by being on the TOU
  - Savings accrued in the winter, while both groups paid more in the summer (this was anticipated)

# TOU Impact by Technology vs. Projections

		No-Tech	EV	ASHP	WH-ASHP	PV	EV & PV	Storage
2022 Pilot Results	Avg Cust. Impact	-\$57 (-4.2%)	-\$202 (-9.3%)	-\$194 (-8.3%)	tbd	tbd	tbd	-\$451 (-15.4%)
2021 Projections	No Load Shift	\$0 (0%)	-\$89 (-5%)	-\$58 (-3%)	-\$198 (-6%)	-\$127 (-9%)	-\$217 (-12%)	N/A
	20% Load Shift	-\$73 (-5%)	-\$180 (-9%)	-\$142 (-8%)	-\$337 (-11%)	-\$240 (-17%)	-\$342 (-19%)	N/A

- ASHP includes both partial and whole-home heating; PV includes solar buyback credits
- Initial observations:
  - Realized savings are roughly in line with the 2021 Projection scenario that included a 20% load shift.
  - Storage savings may improve the economics of storage. E.g. \$450 annual savings over 10 years = \$4,500.
- Source for 2021 Projections: *Memo to Municipal Light Board, from General Manager Craig Spinale, Energy Resources Manager Becca Keane, Energy Specialist Ben Thivierge, Communications Coordinator Aidan Leary, October 20, 2021, re: Residential Time of Use Rate Recommendations*