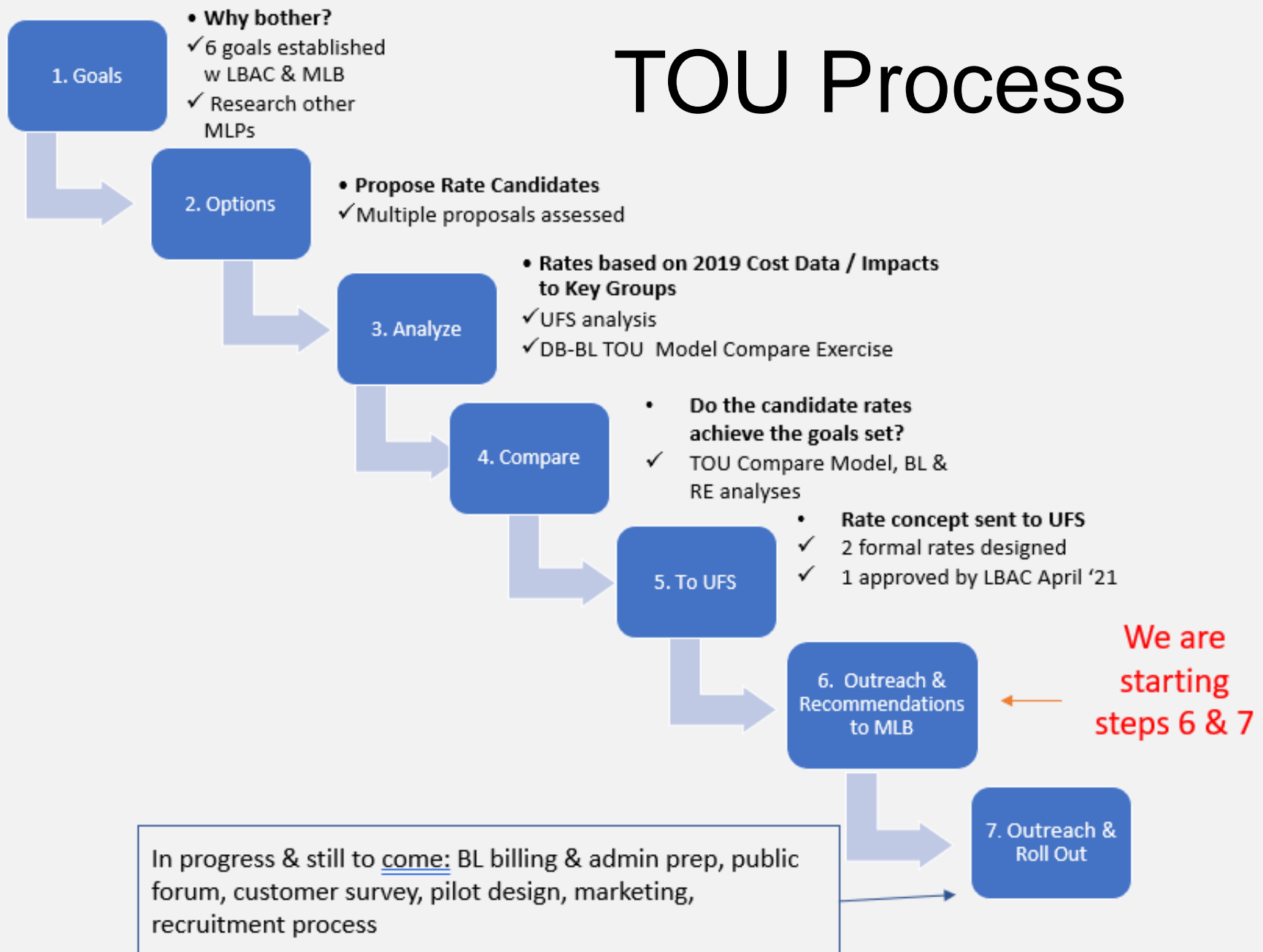


Update on TOU Initiative

Municipal Light Board Meeting
April 12, 2021

TOU Process



Our Goals as approved by MLB and LBAC:

- 1) Align customer savings with savings for BL**
- 2) Support strategic electrification**
- 3) Protect low-income customers**
- 4) Support energy efficiency & solar**
- 5) Ensure BL revenue sufficiency & stability**
- 6) Provide for easy implementation**

Main Rate Scenarios Considered

- **9-Hour Year-Round Peak** – Eliminated. Peak window too long, price signal too dull
- **6-Hour Summer Peak Only** – Eliminated. Did not target 2/3rds of annual transmission costs
- **6 Hour Summer & 4 Hour Winter Peak-** Selected. Meets all goals

Scenario Finalists

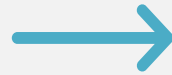
– Scenario 1A:

- On-Peak **includes** Weekends and Holidays
 - Winter [October-May] 4 PM – 8 PM
 - Summer [June-September] 1 PM - 7 PM

– Scenario 1B:

- On-Peak **excludes** Weekends and Holidays
 - Winter [October-May] 4 PM – 8 PM
 - Summer [June-September] 1 PM - 7 PM

This rate
endorsed by
BL & LBAC



Scenario 1A

On-Peak Applicable to
Weekends & Holidays

Residential Rate		
	Current	TOU
Distribution Customer Charge	\$ 10.60	\$ 10.60
Winter		
On-Peak Energy	\$ 0.19317	\$ 0.29944
Off-Peak Energy	\$ 0.19317	\$ 0.13787
On-Peak/Off-Peak Ratio	1.00	2.17
Summer		
On-Peak Energy	\$ 0.19358	\$ 0.45716
Off-Peak Energy	\$ 0.19358	\$ 0.13284
On-Peak/Off-Peak Ratio	1.00	3.44

Residential Rate		
	Current	TOU
Distribution Customer Charge	\$ 10.60	\$ 10.60
Winter		
On-Peak Energy	\$ 0.19317	\$ 0.36312
Off-Peak Energy	\$ 0.19317	\$ 0.14155
On-Peak/Off-Peak Ratio	1.00	2.57
Summer		
On-Peak Energy	\$ 0.19358	\$ 0.58658
Off-Peak Energy	\$ 0.19358	\$ 0.13622
On-Peak/Off-Peak Ratio	1.00	4.31

Scenario 1B

Weekends &
Holidays Off Peak

Solar Buyback

- For TOU enrollees, apply TOU concept & chosen rate design to buyback rate as well → Keep it simple
- Credit Generation & Transmission Rates Only for Excess kWh bought by BL (Distribution Rate not credited)

Peak Period	Buyback Rate Scenario 1A
On Peak Winter	\$0.22199
Off Peak Winter	\$0.06042
On Peak Summer	\$0.37971
Off Peak Summer	\$0.05539

Scenario 1A – Goals Assessment (results per modeling)

Goal	Potential Impact of Scenario 1A
1. Align customer savings with savings for Belmont Light	<ul style="list-style-type: none"> • Estimated savings for Rate A customers with 20% summer load shifting year-round: -2% monthly bill savings (Avg - \$2.33; Top 10% Users- \$6.58) • Peak savings to BL: If pilot occurred in 2020, \$124 per avoided kW during annual FCM peak, \$10.27 per avoided kW during monthly RNS peaks (1 MW avoided peak load= ~\$134k) • Very high likelihood of capturing annual FCM peak and RNS peaks in 10/12 months. Chances for April and October RNS lower (25% and 60%, respectively), but these are our cheapest months
2. Support strategic electrification	<ul style="list-style-type: none"> • Average EV customer w/no behavior change: -\$7.50/mo (-\$5%) w/ 20% summer load shift: \$10.60/mo. (-7%) • Average HP Customer w/ no behavior change: -\$5/mo (-3%) w/ 20% summer load shift: -\$8/mo. (-6%)
3. Protect low-income customers	<ul style="list-style-type: none"> • Average LI customer w/ no behavior change: -\$1/mo (-2%) w/ 20% summer load shift: -\$3/mo (-5%)

Goals Assessment Cont'd

Goal	Potential Impact of 6 & 4-Hour Scenario
4. Support energy efficiency and solar	<ul style="list-style-type: none"> • Energy efficiency: expected 1-3% aggregate kWh reductions based on literature & research
	<ul style="list-style-type: none"> • A main TOU concept- induce more efficient off-peak energy use. • Still quantifying what this potential is for our pilot → more modeling
	<ul style="list-style-type: none"> • Average solar customer w/buyback and no behavior change: -\$10.58/mo. (-9%) w/buyback & 20% summer load shift: -\$13.7/mo. (-12%)
5. Ensure BL revenue sufficiency and stability	<ul style="list-style-type: none"> • Verified by UFS. Rate designed to be revenue neutral
	<ul style="list-style-type: none"> • Expect pilot to cost some money if only obvious “winners” are enrolled. Enrollee cap & pending modeling will help address this.
6. Provide for easy implementation	<ul style="list-style-type: none"> • Still under investigation • BL billing system is capable. Data management & testing pending • Public forum & customer survey to collect feedback on rate design

Next Steps

- Public Forum & Customer Survey
 - Ex. questions: Just how much customer interest is there in a TOU pilot? Is including weekends & holidays in peak/off-peak pricing tolerable? Would a \$0.59 summer on peak rate be preferable?
- Pilot Design
 - Preliminary thoughts: 150 participants, launch fall '21
 - BL & LBAC to model pilot – what results can we expect based on different enrollment scenarios?
- Formal Recommendations to MLB
- Marketing & Recruitment
- Opt-In Pilot Launch!

Rate Detail: Scenario 1A (weekends included)- Recommended Rate

Rates	TOU Phase 0 (Current)		TOU 1
Current Charges			
Monthly Facilities Charge:			
Distribution Customer Charge	\$	10.60	\$ 10.60
TOU Charges			
Winter			
Generation			
On-Peak	\$	0.08939	\$ 0.09513
Off-Peak	\$	0.08939	\$ 0.06041
Transmission			
On-Peak	\$	0.02583	\$ 0.12686
Off-Peak	\$	0.02583	\$ -
Distribution/Conservation			
On-Peak	\$	0.07795	\$ 0.07745
Off-Peak	\$	0.07795	\$ 0.07745
Summer			
Generation			
On-Peak	\$	0.08979	\$ 0.27819
Off-Peak	\$	0.08979	\$ 0.05538
Transmission			
On-Peak	\$	0.02583	\$ 0.10152
Off-Peak	\$	0.02583	\$ -
Distribution/Conservation			
On-Peak	\$	0.07795	\$ 0.07745
Off-Peak	\$	0.07795	\$ 0.07745
Revenue from Rate		\$ 14,561,583	\$ 14,561,583

Rate Detail:
Scenario 1B-
Weekends &
Holidays As Off
Peak

Rates	TOU Phase 0 (Current)	TOU 1
Current Charges		
Monthly Facilities Charge:		
Distribution Customer Charge	\$ 10.60	\$ 10.60
TOU Charges		
Winter		
Generation		
On-Peak	\$ 0.08939	\$ 0.10428
Off-Peak	\$ 0.08939	\$ 0.06121
Transmission		
On-Peak	\$ 0.02583	\$ 0.17850
Off-Peak	\$ 0.02583	\$ -
Distribution/Conservation		
On-Peak	\$ 0.07795	\$ 0.08035
Off-Peak	\$ 0.07795	\$ 0.08035
Summer		
Generation		
On-Peak	\$ 0.08979	\$ 0.36432
Off-Peak	\$ 0.08979	\$ 0.05587
Transmission		
On-Peak	\$ 0.02583	\$ 0.14191
Off-Peak	\$ 0.02583	\$ -
Distribution/Conservation		
On-Peak	\$ 0.07795	\$ 0.08035
Off-Peak	\$ 0.07795	\$ 0.08035
Revenue from Rate	\$ 14,561,583	\$ 14,561,583