

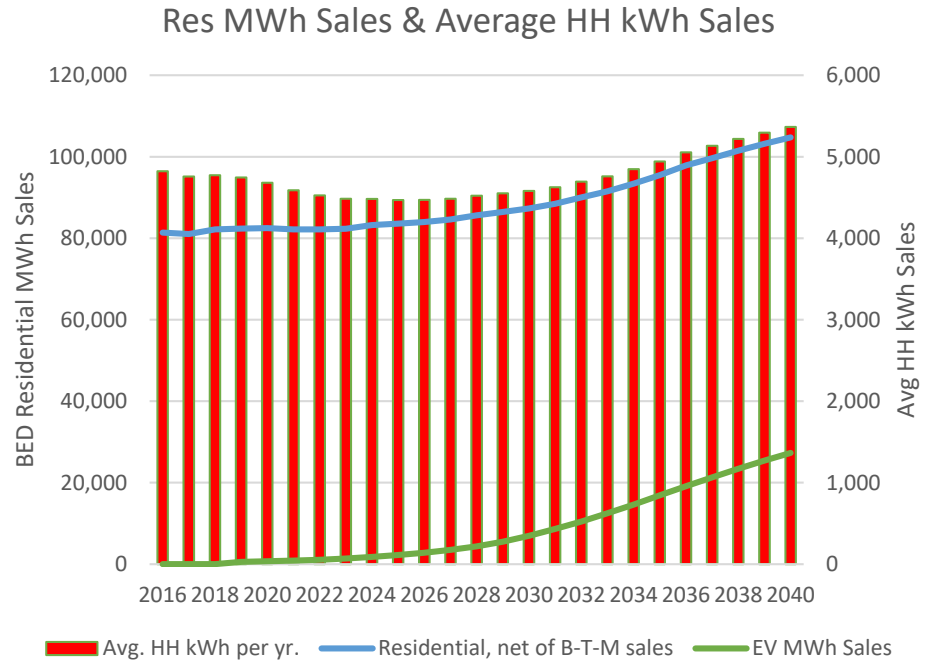


2019 Proposed (updated)  
Tier III Plan  
ASHRAE – May 1, 2019

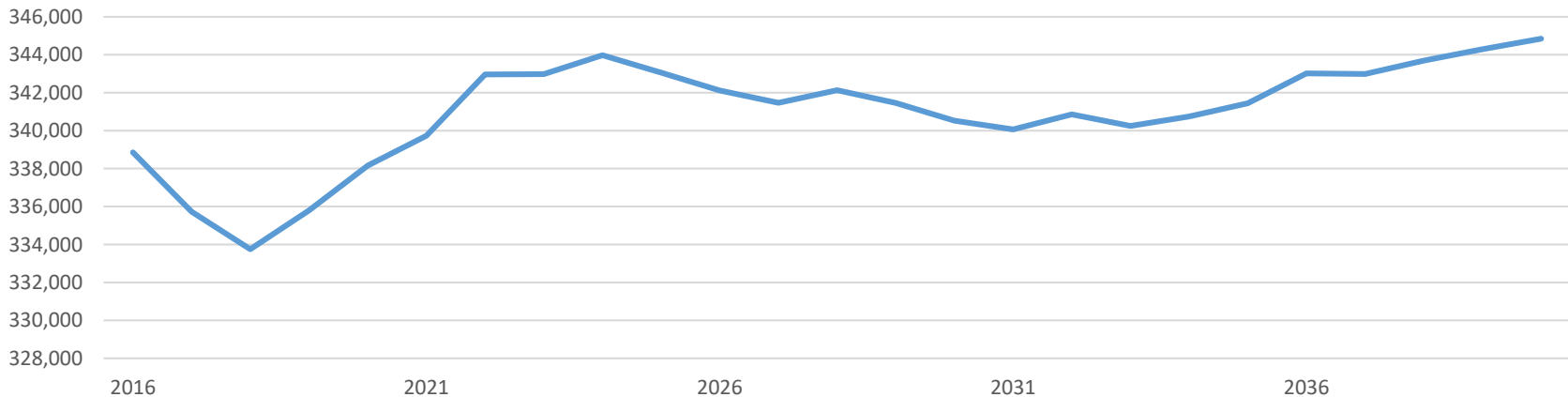
# 2020 IRP – Due Jan.

- Maintain Renewability
- Contain costs
- No Rate increases in immediate future
- Assist transition to NZE community

~PRELIMINARY DATA



### PRELIM Total load, including Co. use



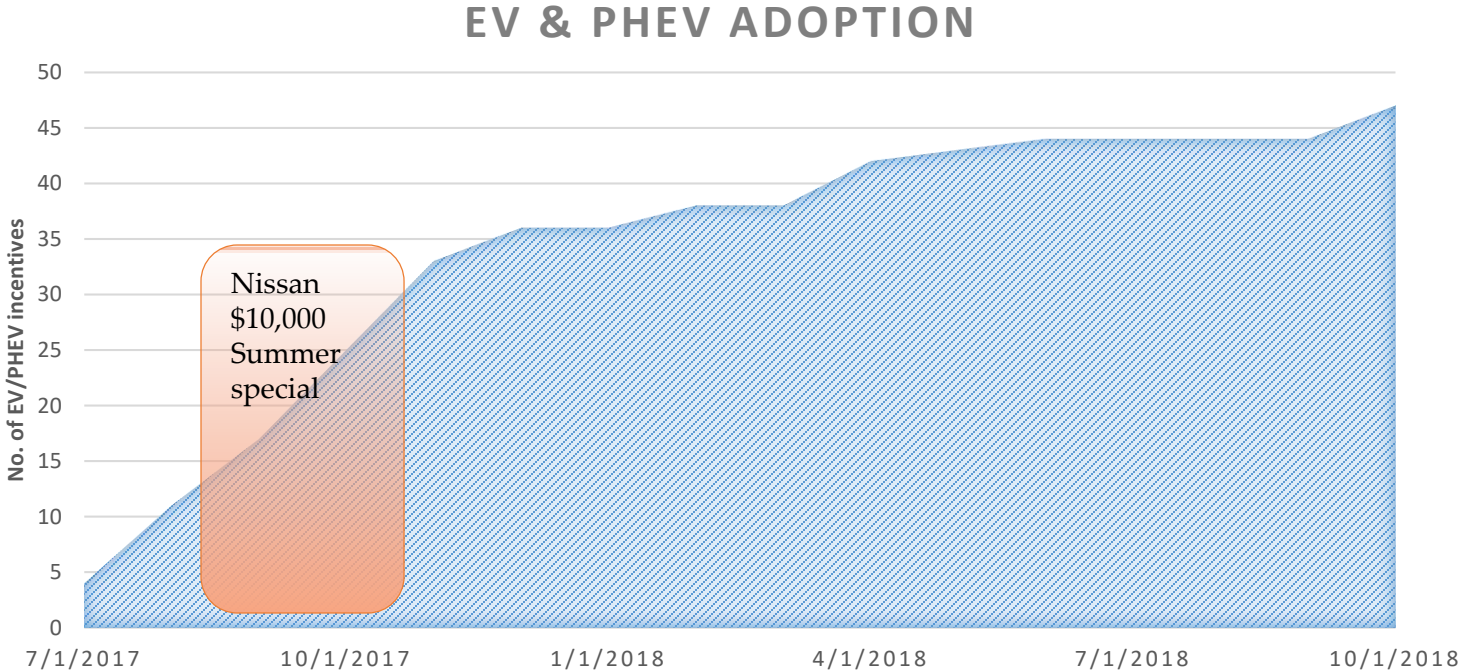
# Tier 3 programs (updated)

Tier III Measure	2019			2020			2021		
	No. of	MWHe	Total	No. of	MWHe	No. of	MWHe	Total Budget	
	Units	Credits	Budget	Units	Credits	Units	Credits	Total Budget	
Electric Buses	2	1,240	\$ 72,050	-	1,240	72,050	-	-	\$ -
All Electric Vehicles	75	2,827	\$ 132,000	130	4,900	\$ 228,800	150	5,654	\$ 264,000
Plug-In Electric Vehicles	75	2,109	\$ 82,500	100	2,812	\$ 110,000	125	3,515	\$ 137,500
BED owned EV Chargers	7	48	\$ -	7	56	\$ -	7	64	\$ -
Workplace EV Chargers	10	338	\$ 12,500	5	169	\$ 6,250	0	0	\$ -
E Bikes	125	667	\$ 35,000	125	667	\$ 37,000	150	801	\$ 44,000
ccHP (non natural gas customers)	5	102	\$ 4,813	5	102	\$ 4,813	5	102	\$ 4,813
Electric Forklifts	1	119	\$ 7,150	1	119	\$ 6,600	1	119	\$ 6,050
Electric Commercial Lawnmowers	1	82	\$ 3,850	1	82	\$ 3,850	1	82	\$ 3,850
Electric Residential Lawnmowers	25	47	\$ 2,750	30	56	\$ 2,475	35	35	\$ 1,925
Reverse Auctions	1	2,419	\$ 150,000	1	3,163	\$ 200,000	1	3,876	\$ 250,000
Totals		9,998	\$ 502,613		13,366	\$ 671,838		14,247	\$ 712,138
Max. MWHe & Budget allowed		11,316	\$ 701,520		13,668	\$ 864,333		16,108	\$ 1,038,948
Over(under)		(1,317)	\$ (198,908)		(302)	\$ (192,496)		(1,861)	\$ (326,811)
Expected MWH e Yield			\$ 50.27			\$ 50.26			\$ 49.98
ACP per MWHe			\$ 62.00			\$ 63.24			\$ 64.50

# Residential EV-EVSE rate discount – announced 1/22/2019, approved Dec. 2019

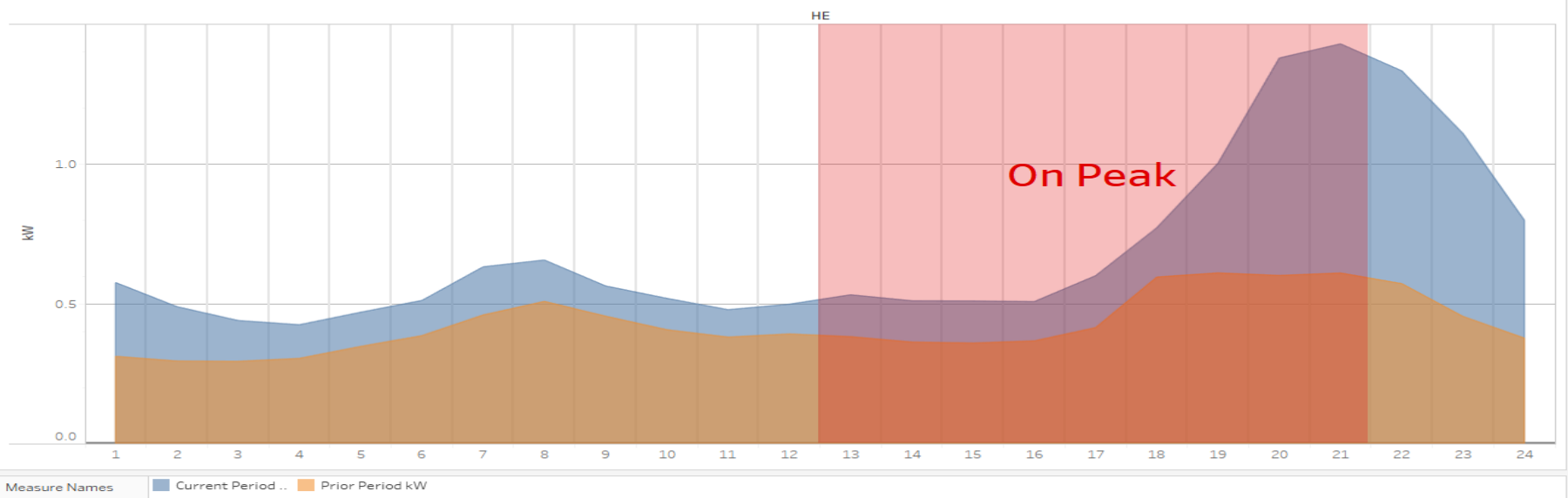
	Current 2019 Incentives		Updated 2019 Incentives	
AEV incentive	\$1,200	\$1,800	\$1,200	\$1,800
PHEV Incentive	\$600	\$1,200	\$1,000	\$1,500
Residential EVSE Tier 3 incentive (AEV only)	\$ -		\$ 400	
Residential EV Rate \$/kWh (AEV/PHEV)	\$ -		\$ 0.08	
<i>Low to moderate income households =</i>				

# Electric Vehicles & PHEV

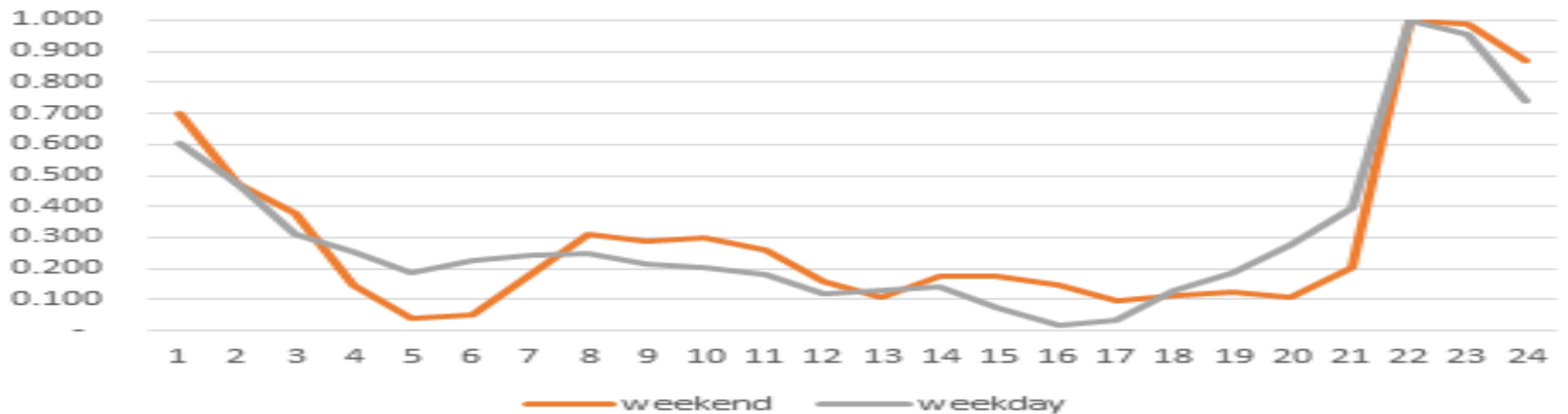


# EV Charging habits – thus far

## Weekday Charging



## EV Rate Charging Shape



## Can EV owners save money charging off peak?

Annual VMT	10,000	11,000	12,000
Annual kWh Consumption	2,857	3,143	3,429
Annual Electric Bill	\$420	\$462	\$504
Disc Annual Electric Bill	\$229	\$251	\$274
Electric Bill Savings	\$191	\$211	\$230
Electric Bill Savings (monthly)	\$16.0	\$18	\$19
Electric savings compared to ICE	\$760	\$836	\$911

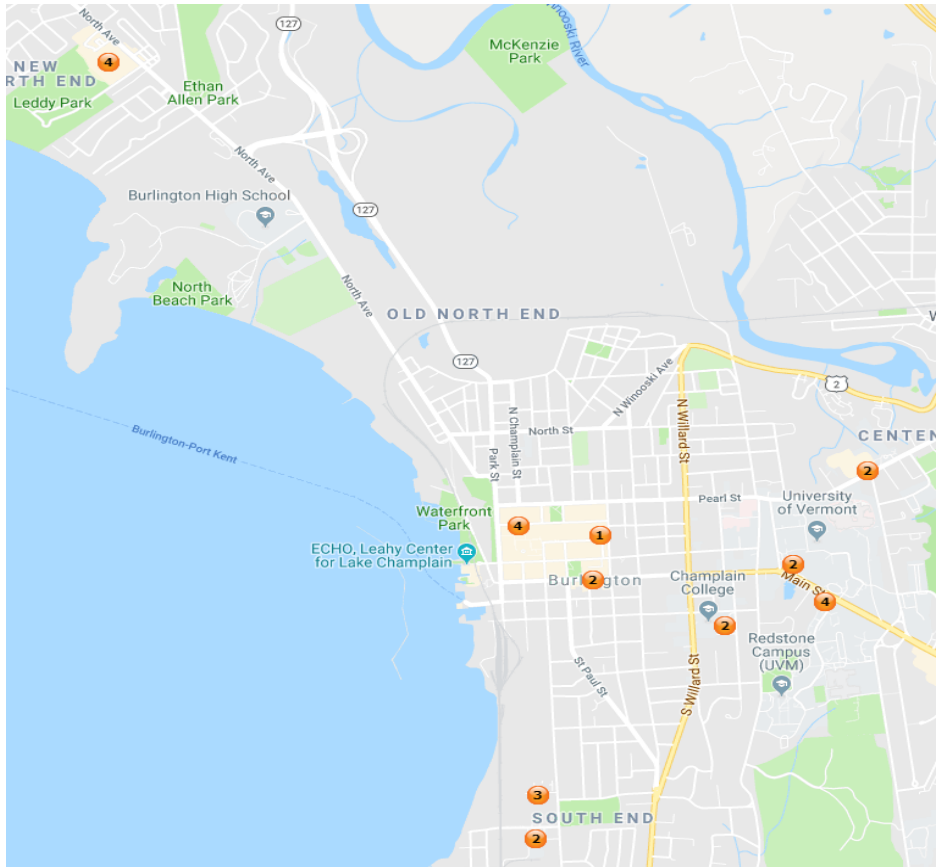
# Electric Vehicles & PHEV

All Electric Vehicles	2019	2020	2021
No. of Units	75	130	150
Total Lifetime MWHe Credits	2827	4900	5654
Incentive per EV + EVSE	\$ 1,600	\$ 1,600	\$ 1,600
Aggregate Incentive	\$ 120,000	\$ 208,000	\$ 240,000
Other Expenses	\$ 12,000	\$ 20,800	\$ 24,000
Total Budget	\$ 132,000	\$ 228,800	\$ 264,000
Cost per MWHe	\$ 46.69	\$ 46.69	\$ 46.69
ACP per MWHe	\$ 62.00	\$ 63.24	\$ 64.50
NPV Net Lifetime Revenue	\$ -	\$ -	\$ -
Net Cost per MWHe	\$ 46.69	\$ 46.69	\$ 46.69

Plug In Elec Vehicles	2019	2020	2021
No. of Units	75	100	125
Total Lifetime MWHe Credits	2109	2812	3515
Incentive per PHEV + EVSE	\$ 1,000	\$ 1,000	\$ 1,000
Aggregate Incentive	\$ 75,000	\$ 100,000	\$ 125,000
Other Expenses	\$ 7,500	\$ 10,000	\$ 12,500
Total Budget	\$ 82,500	\$ 110,000	\$ 137,500
Cost per MWHe	\$ 39.12	\$ 39.12	\$ 39.12
ACP per MWHe	\$ 62.00	\$ 63.24	\$ 64.50
NPV Net Lifetime Revenue	\$ -	\$ -	\$ -
Net Cost per MWHe	\$39.12	\$39.12	\$39.12



# BED owned, publicly available EVSE



## BE CHARGERS / BE01

175 Main St, Burlington, Vermont 05401, United States

**Notes:** Corner of Church and Main. DPW parking fee of \$1.50 per hr. also assessed at this site from a separate parking meter.

**Port 1:** (120V, 16A, NEMA 5-20R) **Available**

**Port 2:** (208-240V, 30A, J1772) **In Use**

Reservations Disabled

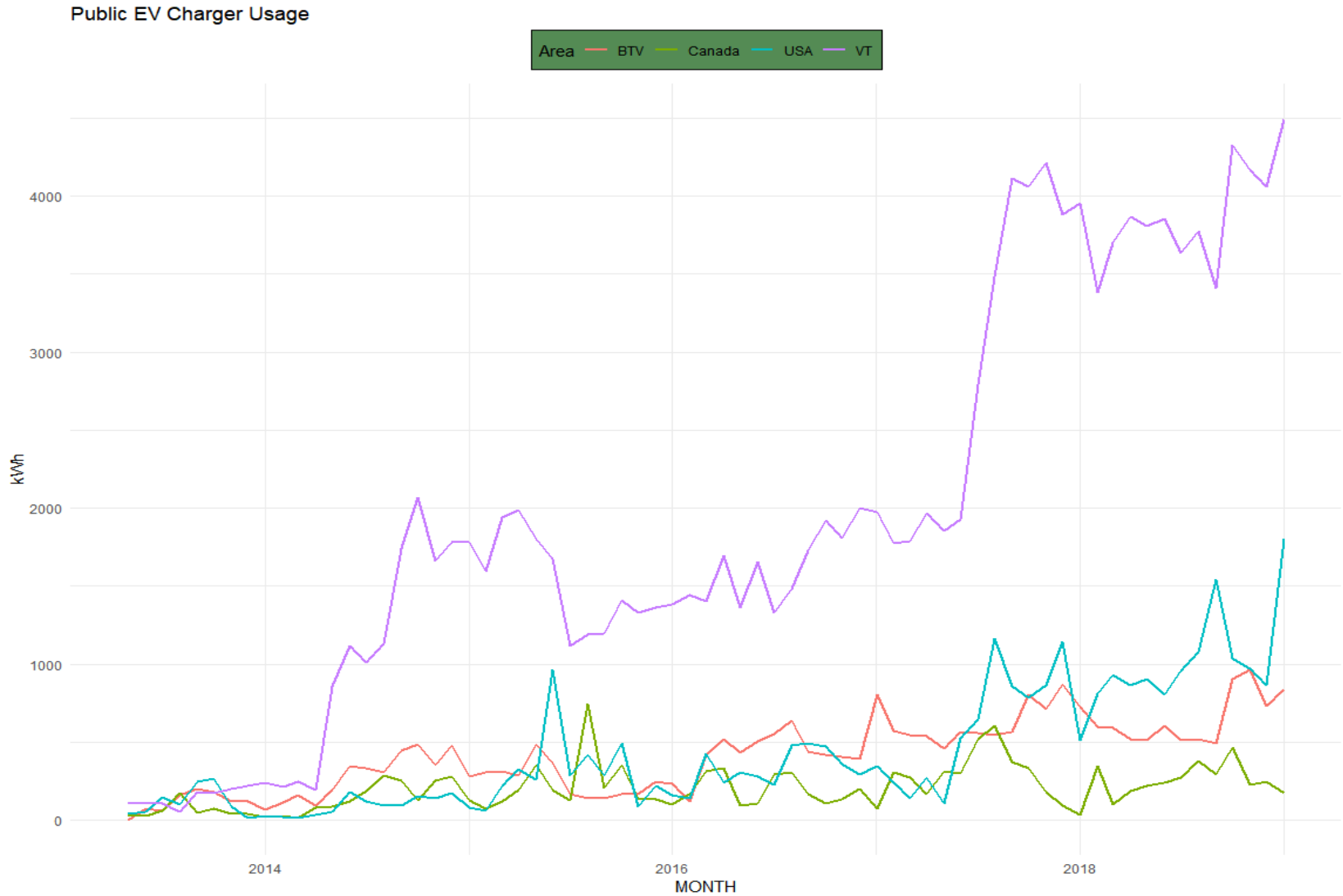
### Rates

Station Parking	Free	\$1.00/hr
	First 4 hr(s)	Thereafter
Energy	\$0.173/kWh	

[Get Directions](#)



# BED owned, publicly available EVSE



# Workplace EV charging program

Workplace EVSE	2019	2020	2021
No. of Units	10	5	0
Total Lifetime MWHe Credits	338	169	0
Incentive per measure	\$ 1,000	\$ 1,000	\$ -
Aggregate Incentive	\$ 10,000	\$ 5,000	\$ -
Other Expenses	\$ 2,500	\$ 1,250	\$ -
Total Budget	\$ 12,500	\$ 6,250	\$ -
Cost per MWHe	\$ 37	\$ 37	\$ -
ACP per MWHe	\$ 62.00	\$ 63.24	\$ 64.50
NPV Net Lifetime Revenue	\$20,848	\$10,424	\$0
Net Cost per MWHe	(25)	(25)	-



# What does Tier 3 look like to the customer



- Thank You