



CAPITAL TRANSIT

Clean Transportation Roundtable

September 2023

Juneau Alaska

- **Population:** Approximately 31,973
- First place in Alaska with electricity in 1893 generated from Hydroelectric plants at Sheep Creek and Salmon Creek
- Capital City
- Roughly 190 miles of State Maintained roads
- Only State Capital inaccessible by road
- Located Roughly 570 air miles from Anchorage
900 miles by air to Seattle



CAPITAL TRANSIT

3 Core Routes providing 30-minute
service 7 days per week

4 weekday express and commuter
routes that operate Monday – Friday

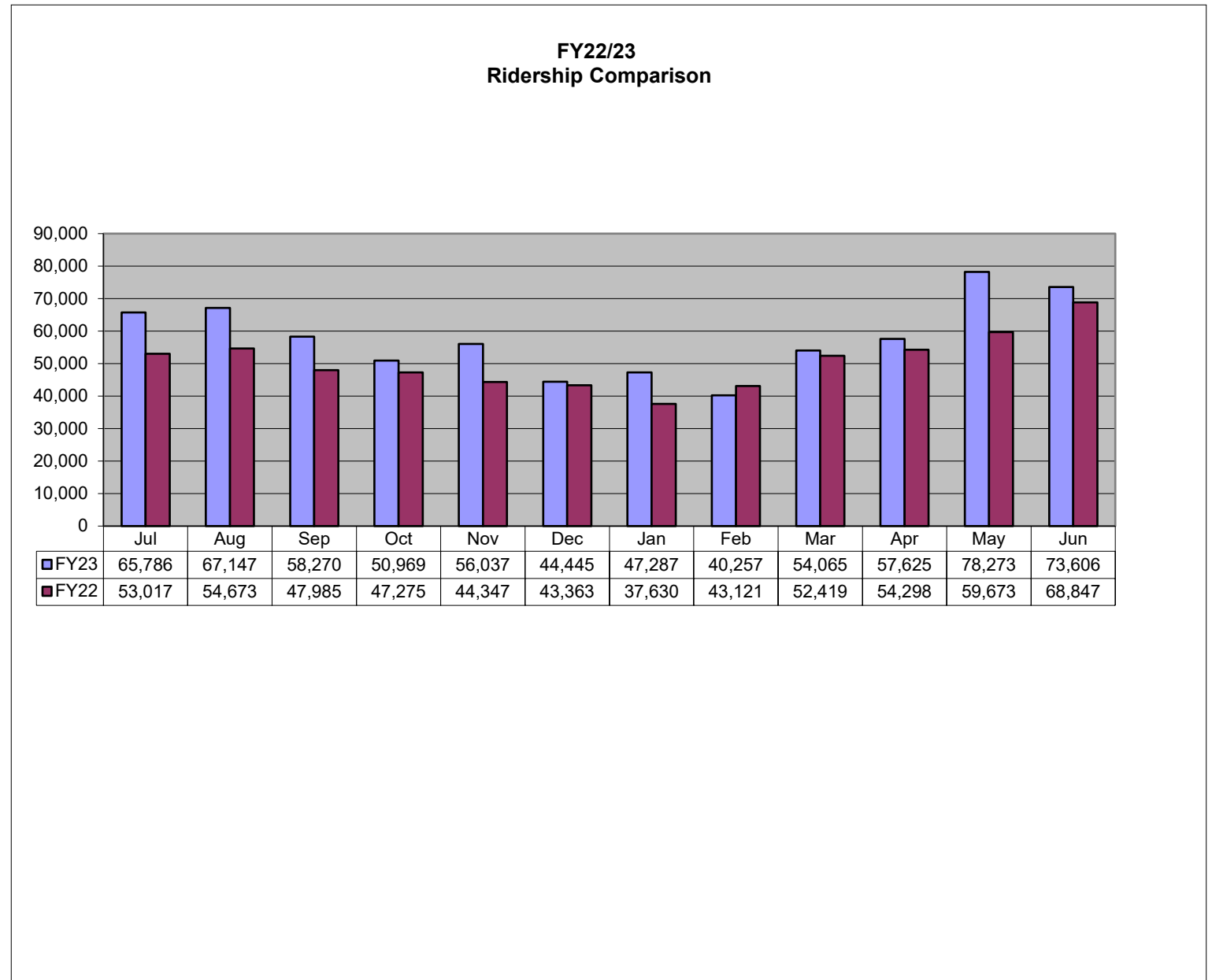
2 Connector Routes that provide
service at peak hours to areas located
in the Mendenhall Valley

32 Drivers, 3 Lead Drivers, 4
Mechanics, 3 Service Technicians, 4
Adminastrators



Ridership

- Pre-Pandemic ridership was over 1 million rides per year
- Ridership continues to follow nationwide trend of increasing post pandemic
- Capital Transit is proud to have one of the highest ridership rates for a Rural Communities in the country





Fleet

- 18 Fixed Route Buses
- 10 Para Transit cutaways
- 4 Administrative Support Vehicles (3 of which are Electric)
- Currently Alaska's Only Battery Electric Bus

Transitioning to Clean Energy

RESOLUTION OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 2808

A Resolution Adopting the Juneau Renewable Energy Strategy.

WHEREAS, by Resolution 2593, the City and Borough of Juneau adopted the Juneau Climate Action and Implementation Plan, designed to lower Juneau's greenhouse gas emissions by decreasing area-wide consumption of energy in general and fossil fuels in particular; and

WHEREAS, the Juneau Climate Action and Implementation Plan called for the development of an energy plan for Juneau; and

WHEREAS, the Juneau Commission on Sustainability worked with the Community Development Department and a consultant to draft a proposed Juneau Energy Plan; and

WHEREAS, the draft plan was first presented to the Assembly on July 25, 2015, followed by a period of public consultation; and

This revised version provides technical amendments to background information on the Juneau electricity system as approved by the Juneau Commission on Sustainability on March 14, 2018. These technical amendments are noted on this version which was approved by Assembly Resolution 2808. The amendments do not alter the recommended actions or goal of 80% renewable by 2045. See Appendix G – Errata for more details.

CBJ Resolution 2808
February 12, 2018



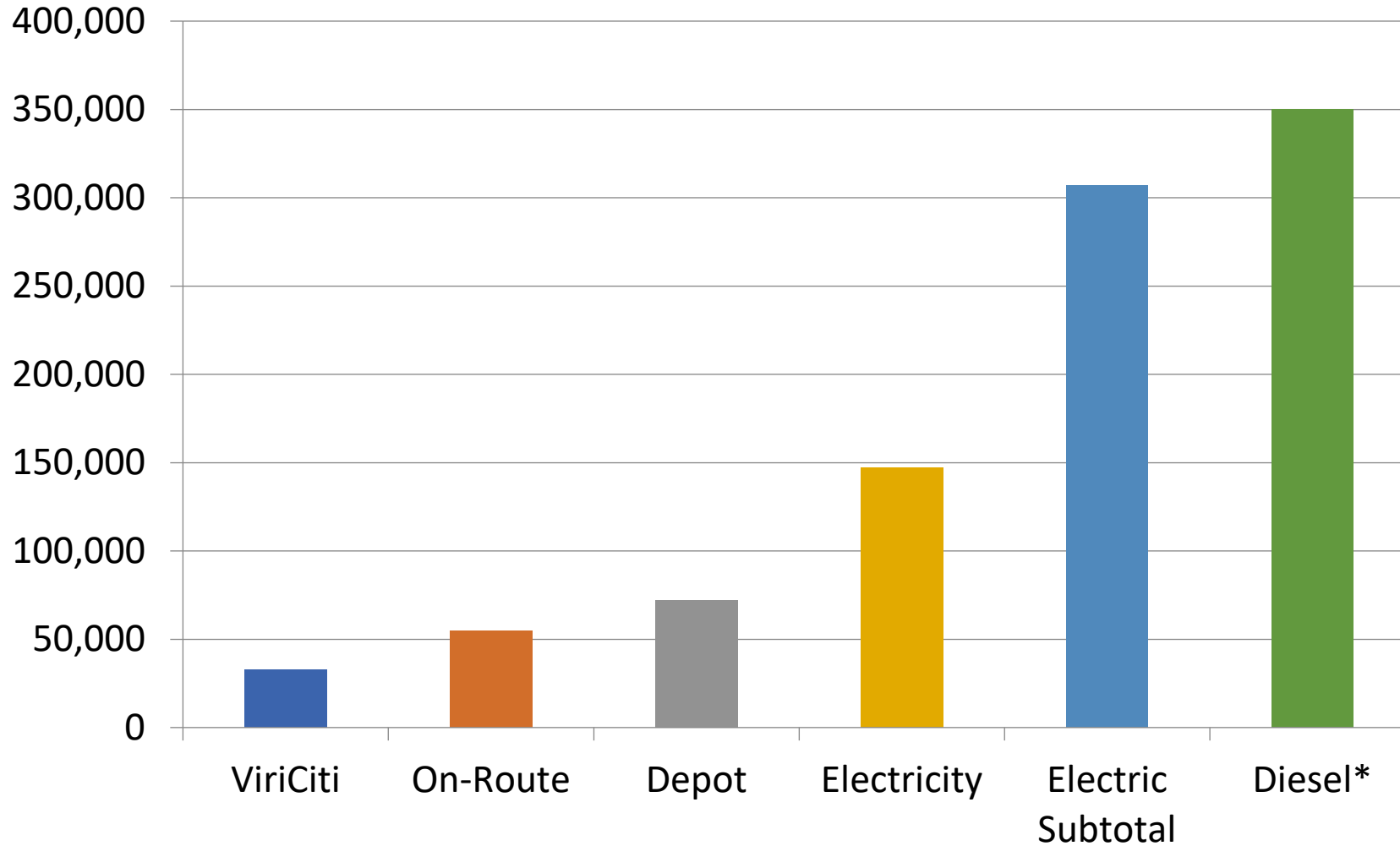
City and Borough of Juneau
Juneau Commission on Sustainability
www.juneau.org/sustainability

Juneau Electricity

- Normally 100% generated from Hydropower
- Off peak rate of \$.0770 (10pm – 6am)
- Experimental EV Fast Charging Rate



Potential Operating Costs of Fully Electric Fleet



* Diesel calculated as 700,000 miles / 7 miles / gal * \$3.50 / gal

Pro / Cons

	Cord	Pantograph	Inductive
Maturity	+	~	-
Weather	-	~	+
Vandalism	-	~	+
Connection time	-	~	+
Standardization	+	+	-

+ is better than competition, ~ is not better not worse, - is worse

Overhead DC Charging



SAE J-3105-1

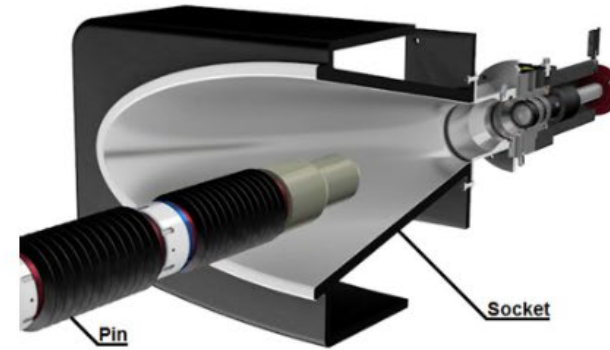
**Infrastructure-mounted Cross
Rail Connection**

MOST PREVALENT



SAE J-3105-2

**Vehicle-mounted Pantograph
Connection**



SAE J-3105-3

**Enclosed Pin and Socket
Connection**

T1 Charging Technology



Image from Valmont Structures

Funding

Funding			
Name	Grant Funds	Match	Total
FTA LoNo Bus	\$ 4,100,000.00	\$ 723,530.00	\$ 4,823,530.00
FTA LoNo Bus	\$ 1,849,999.00	\$ 326,472.00	\$ 2,176,471.00
LoNo chrgers	\$ 3,164,401.00	\$ 558,426.00	\$ 3,722,827.00
VTC on-route charging	\$ 1,446,827.00	\$ 160,759.00	\$ 1,607,586.00
Depot Upgrades	\$ 2,264,000.00	\$ 566,000.00	\$ 2,830,000.00
Totals:	\$ 12,825,227.00	\$ 2,335,187.00	\$ 15,160,414.00

Fleet Transition Plan

Unit #	Vehicle Type	Year	Useful Life	FY 2023	FY 2024	FY 2025	FY 2026	F Y2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2034	FY 2035	FY 2036
6052	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6053	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6054	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6055	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6056	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6057	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6058	2010 Gillig 35FLF Bus - 35', accessible, low floor	2010	12	1,000,000												1,800,000
6659	2016 Gillig 35FLF Bus - 35', accessible, low floor	2017	12						1,215,500							
6660	2016 Gillig 35FLF Bus - 35', accessible, low floor	2017	12						1,215,500							
6661	2016 Gillig 35FLF Bus - 35', accessible, low floor	2017	12						1,215,500							
6662	2016 Gillig 35FLF Bus - 35', accessible, low floor	2017	12						1,215,500							
6863	2018 Gillig 35FLF Bus - 35', accessible, low floor	2018	12								1,340,100					
6864	2018 Gillig 35FLF Bus - 35', accessible, low floor	2018	12								1,340,100					
6865	2018 Gillig 35FLF Bus - 35', accessible, low floor	2018	12								1,340,100					
6866	2018 Gillig 35FLF Bus - 35', accessible, low floor	2018	12								1,340,100					
6867	2018 Gillig 35FLF Bus - 35', accessible, low floor	2018	12								1,340,100					
6868	2018 Gillig 35FLF Bus - 35', accessible, low floor	2018	12								1,340,100					
6069	2020 Proterra ZX5 Bus - 40'	2020	12										1,630,000			
6811	2018 Chevrolet Bolt EV	2018	10						52,800							
6812	2018 Chevrolet Bolt EV	2018	10						52,800							
6813	2018 Chevrolet Bolt EV	2018	10						52,800							



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Questions?