

ALASKA ENERGY AUTHORITY

# Alaska EV Working Group

Quarterly Meeting  
May 5, 2026

---



50 YEARS OF SERVICE



# Agenda

---

## Introductions

## Presentation – Hybrid & Electric Marine Vessel Propulsion

- *Chandler Kemp, Alaska Center for Energy and Power*

## Presentation – Chugach Trends & 2026 Update

- *Mark Henspeter, Chugach Electric Association*

## Presentation – EV Charging Update

- *Kris Hall, ReCharge Alaska*

## NEVI Program Phase 2 Update

- *Quinlan Harris, Alaska Energy Authority*

## Around the Room Updates

- *All*

# Piloting hybrid and fully electric propulsion systems

Professor Chandler Kemp

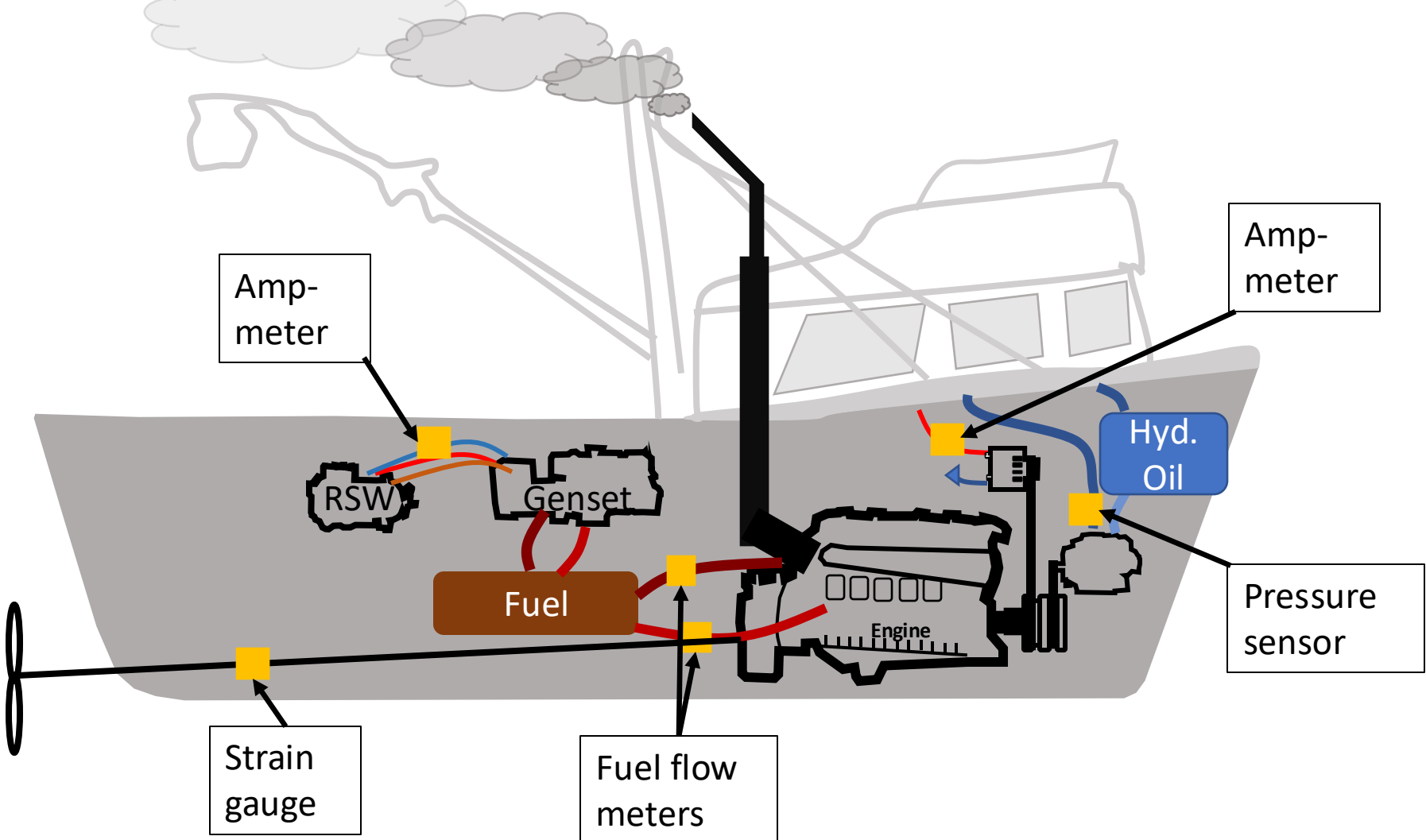
University of Alaska Fairbanks Bristol Bay Campus



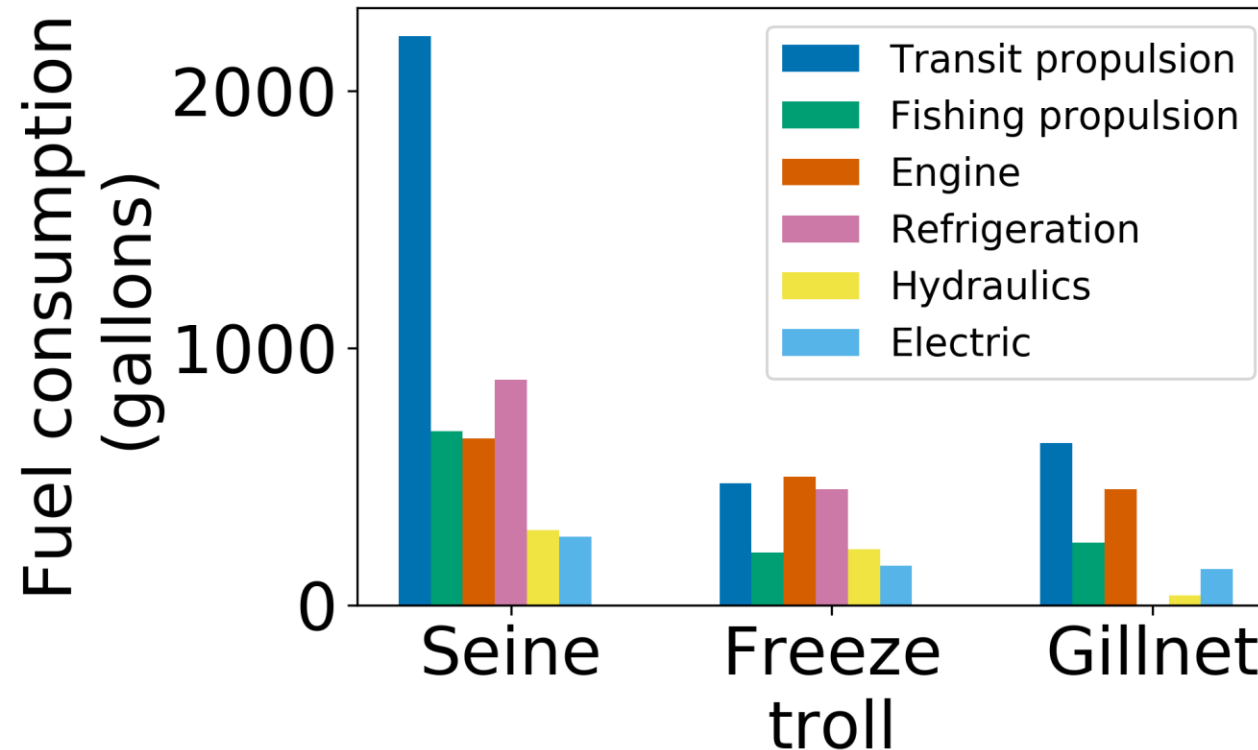
# Outline

- How do fishing boats use energy?
- What technologies are we piloting?
- How has the installation and launch gone in practice?
- What's next?

# Fishing boats have propulsion, hydraulic, and electrical loads

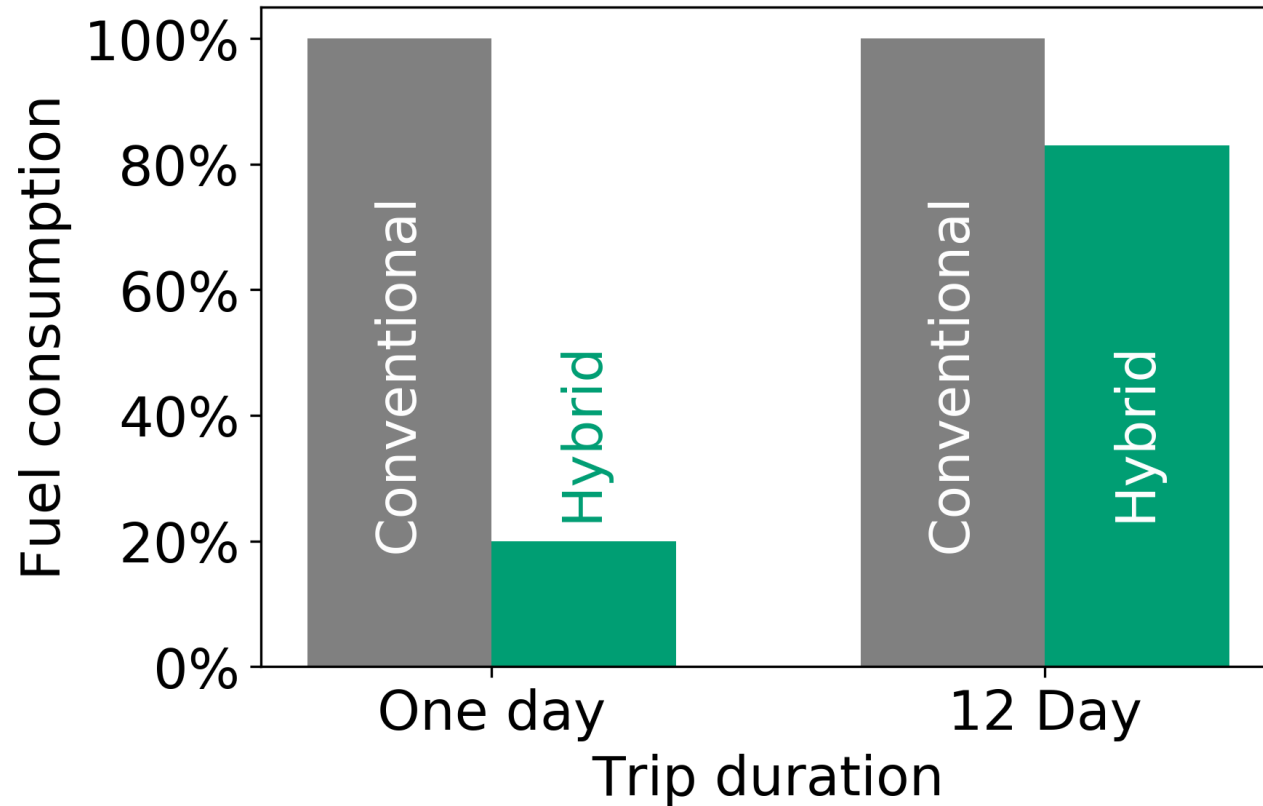


# Example fuel consumption profiles for 50 days of operation\*



\*Load profiles are HIGHLY variable. These examples were generated using the online VEAT default values and average vessel characteristics for each fishery. <http://35.232.113.60/energyaudit/>

Fuel savings with a hybrid system depend on the operating profile.

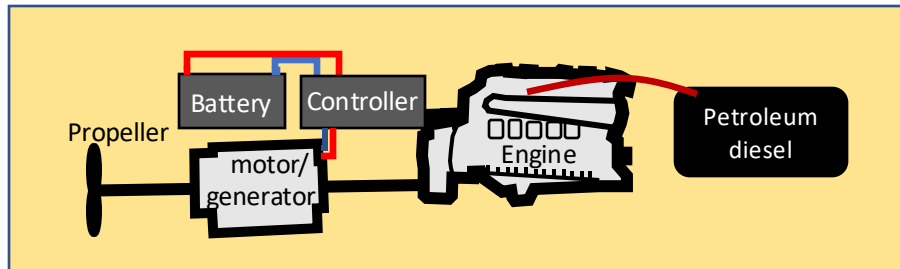


# Outline

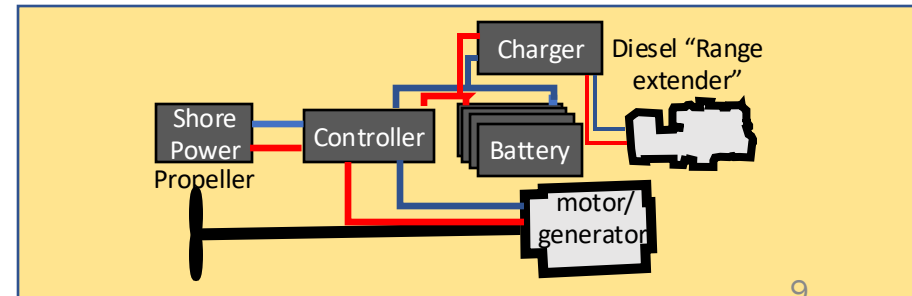
- How do fishing boats use energy?
- **What technologies are we piloting?**
- How has the installation and launch gone in practice?
- What's next?

We are piloting 1 parallel hybrid drive and one series hybrid drive.

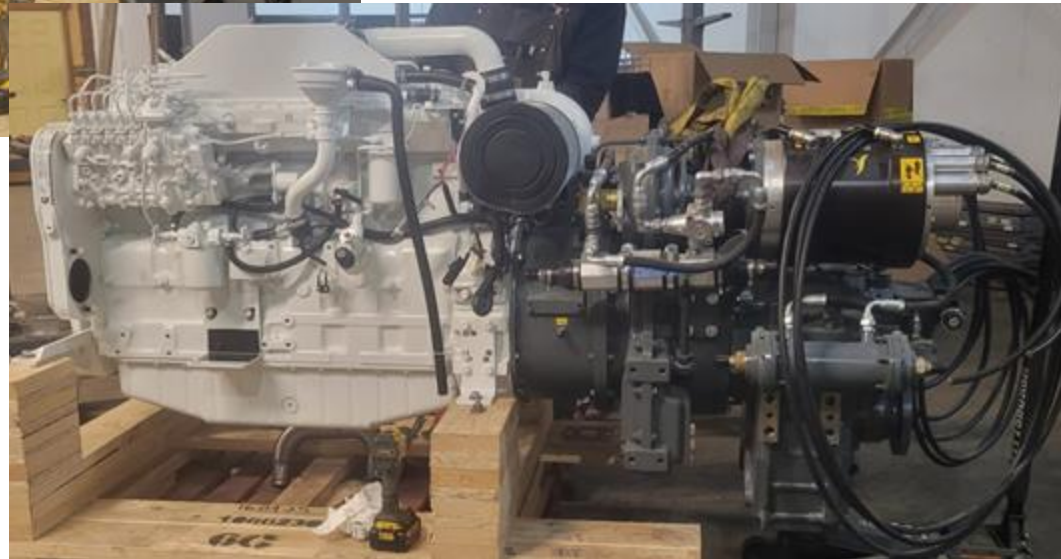
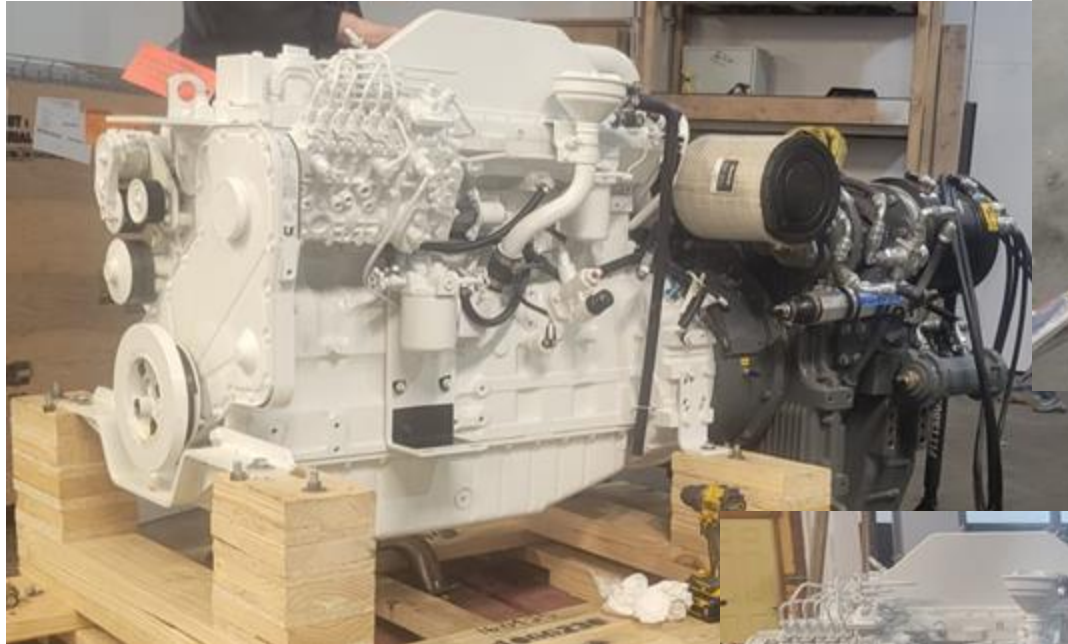
**Parallel Hybrid Drive**



**Series Hybrid Drive**



# Parallel Hybrid Drive



It's Scalable!

Max

kW(HP)

165(220)



435(580)



620(830)



1230(1630)

# Series hybrid drive system components

## OVERVIEW



#	Description	Wt(kg)	L(mm)	W(mm)	H(mm)
1	Inboard Unit	290			
2	E-Brain	0,5	160	100	61
3	Screen	2,1	260	177	61
4	Battery	380	1111	795	351
5	Onboard Charger	16	491,8	347,9	95,2
6	DC/DC Converter	1,8	205.5	186	68
7	Control system harness	-	-	-	-
8	Ventilation Fan	0,7	150	257	290
9	HV Cabinet	15	531	254	205
10	Router	0,1	74	83	25
11	Lever	0,5	310	210	138

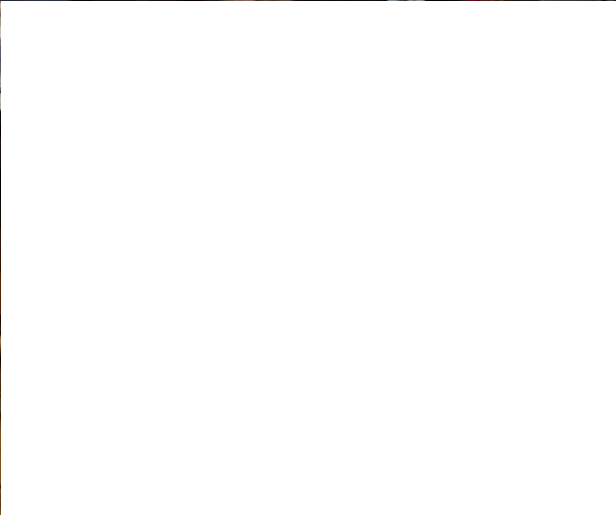
# Outline

- How do fishing boats use energy?
- What technologies are we piloting?
- **How has the installation and launch gone in practice?**
- What's next?

F/V Mirage is in the water!





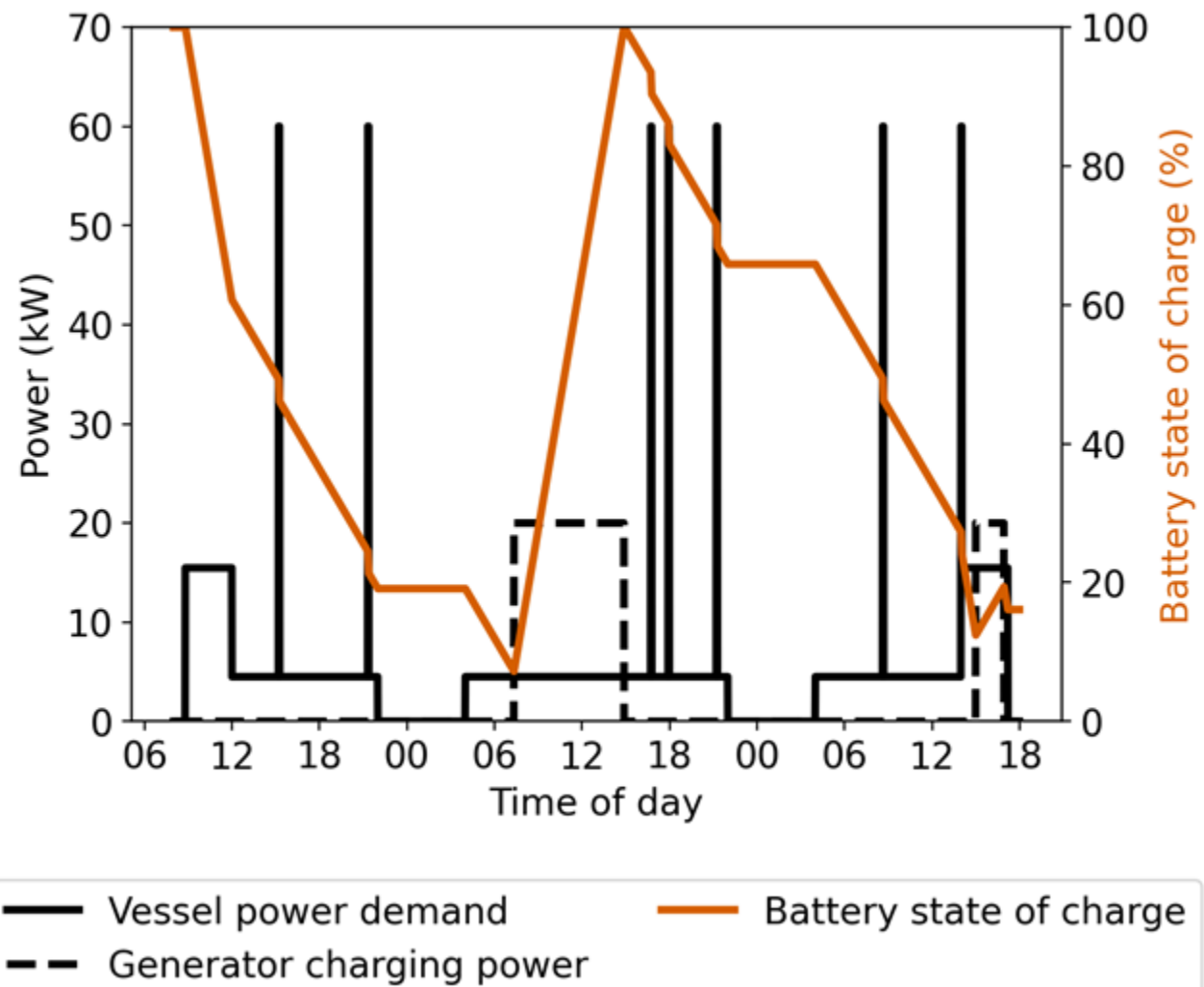
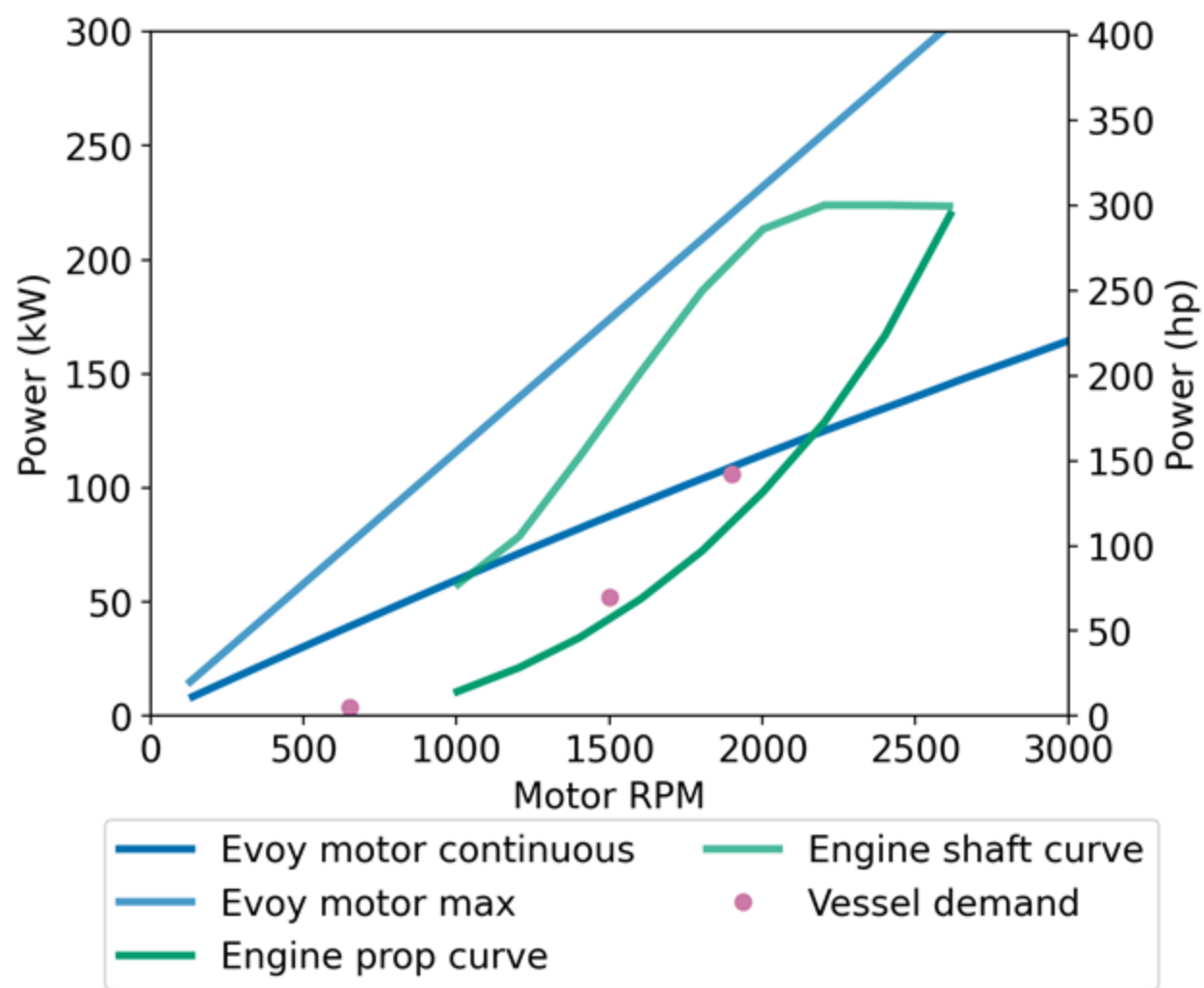




FV Energizer is in progress

32' Gillnetter





# Outline

- How do fishing boats use energy?
- What technologies are we piloting?
- How has the installation and launch gone in practice?
- **What's next?**

# We are thinking about how to make this technology more accessible

- Monitoring performance of the first two pilots
- Investigating fully electric mariculture vessels
- Building workforce capacity
- Working on cost reductions

Chandler Kemp  
ckemp6@alaska.edu



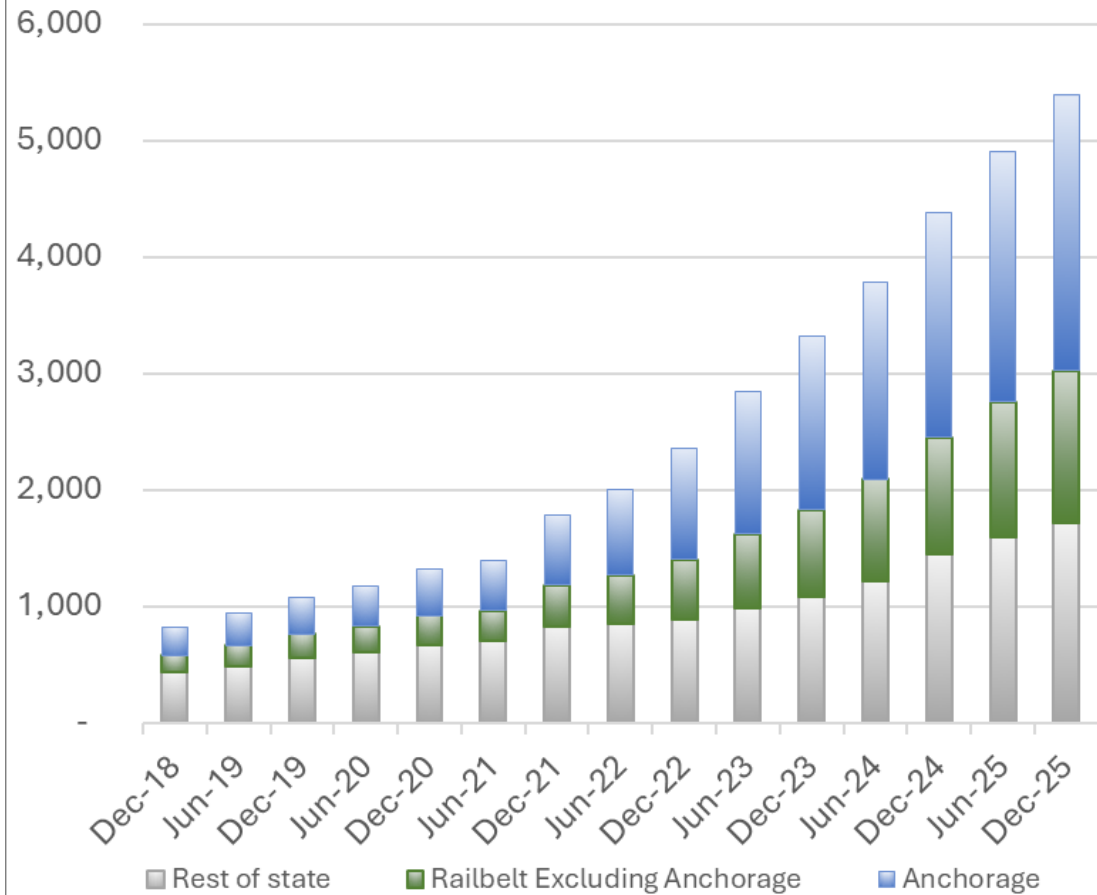


# Chugach Trends and 2026 Update

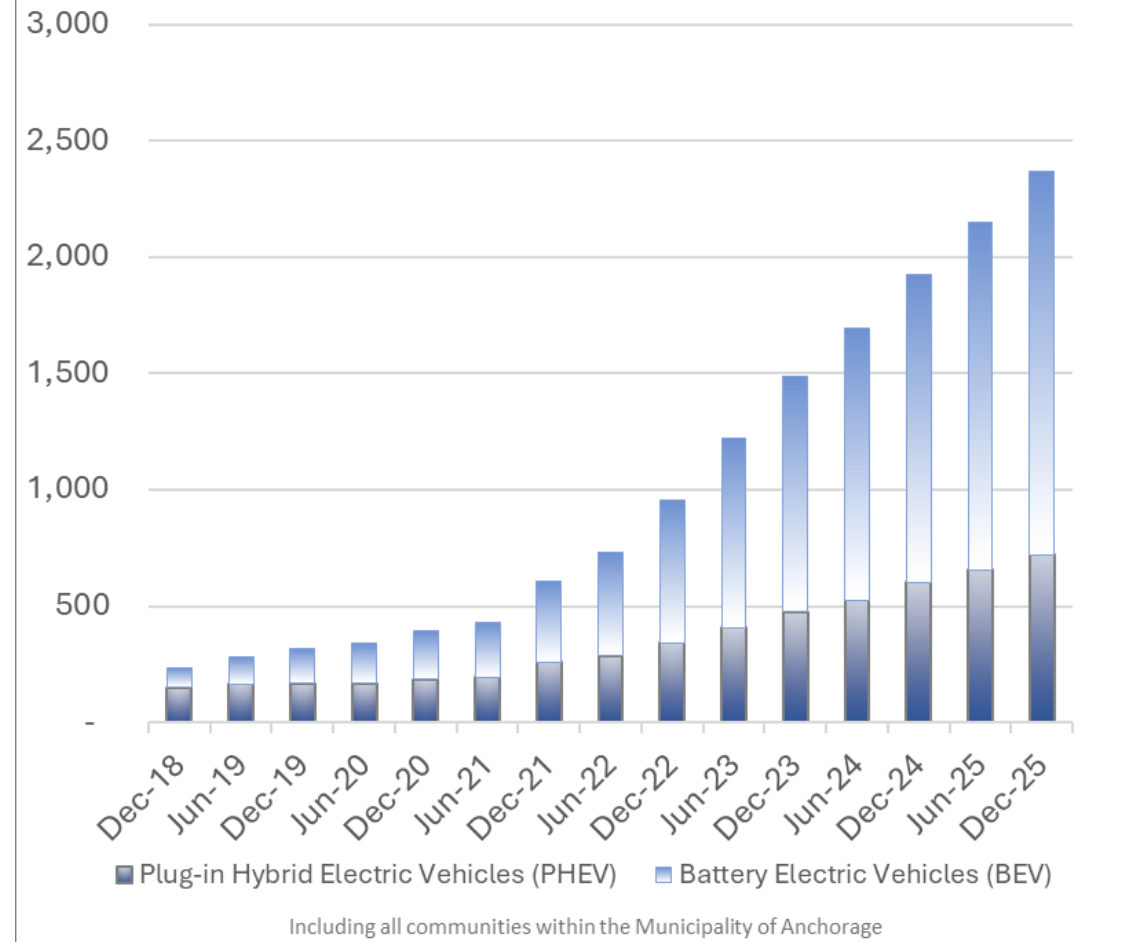
AEA EV Technical Working Group – 5/5/26  
Mark Henspeter - Chugach Electric Association, Inc.

# Regional Electric Vehicle Counts

## Alaska EVs by Region

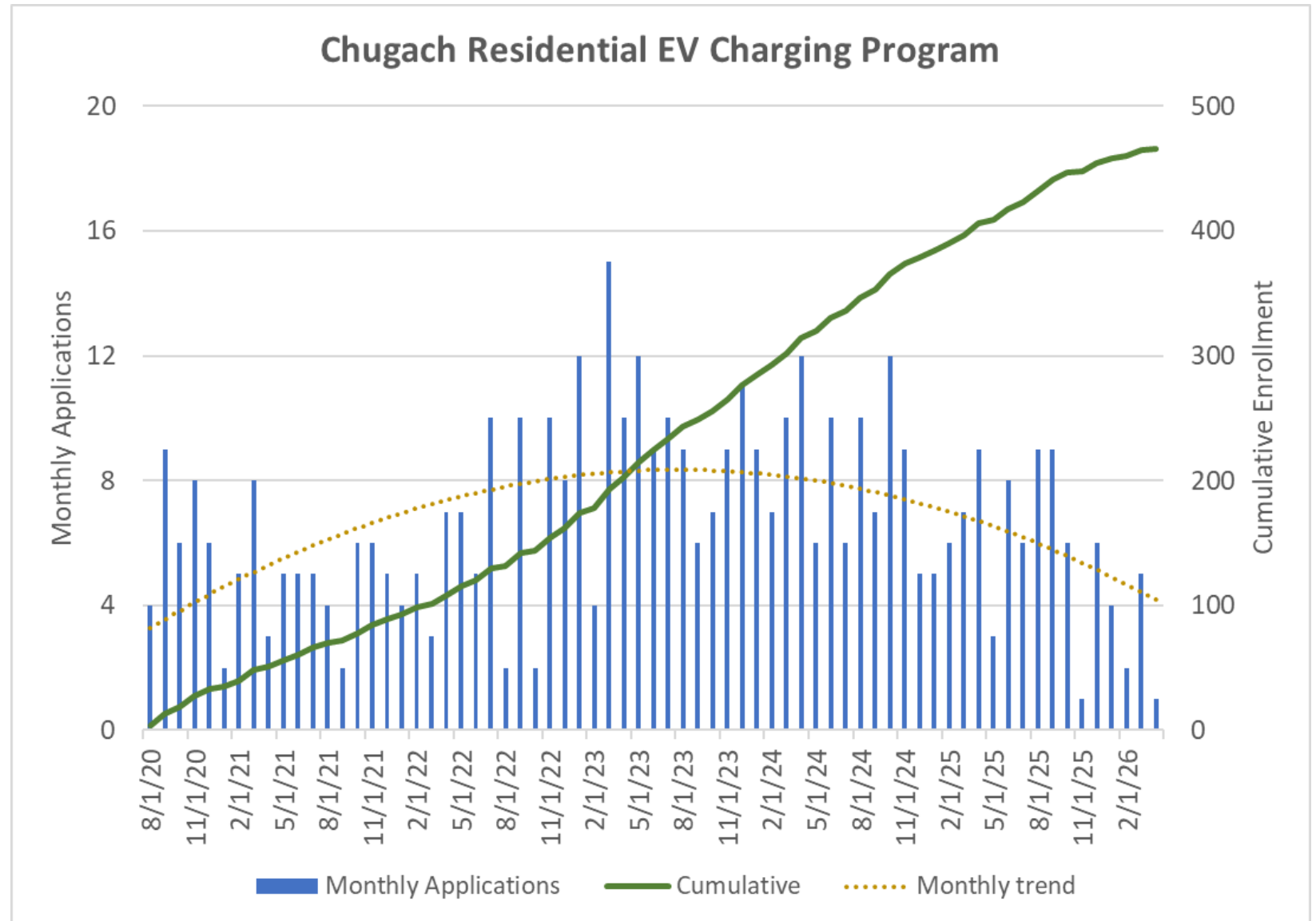


## Types of Anchorage EVs



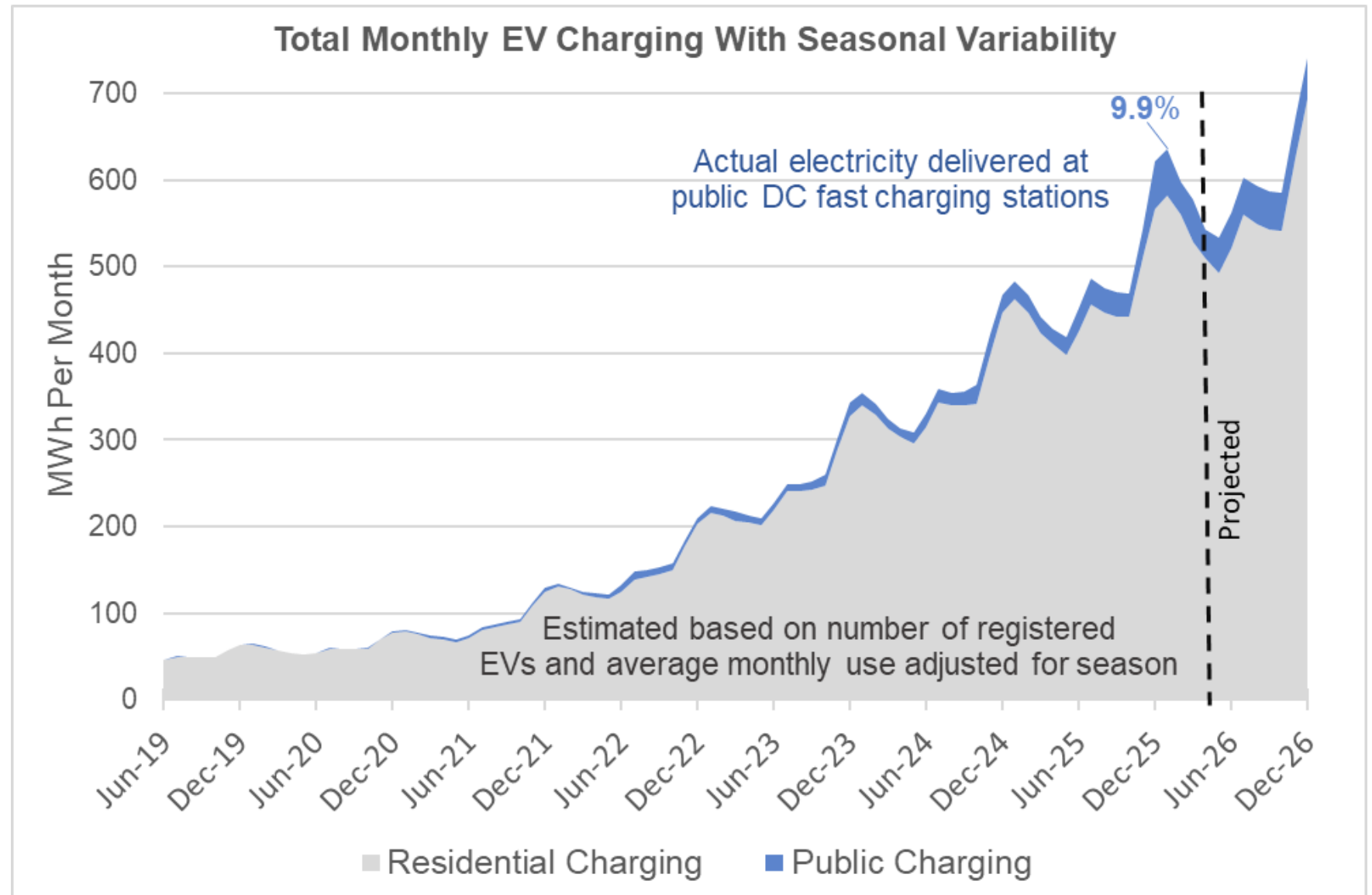
# Adoption Trends

- Anchorage averaging about 45 new EVs per month
- EV shipping constraints are slowing adoption and enrollment in Chugach incentive programs

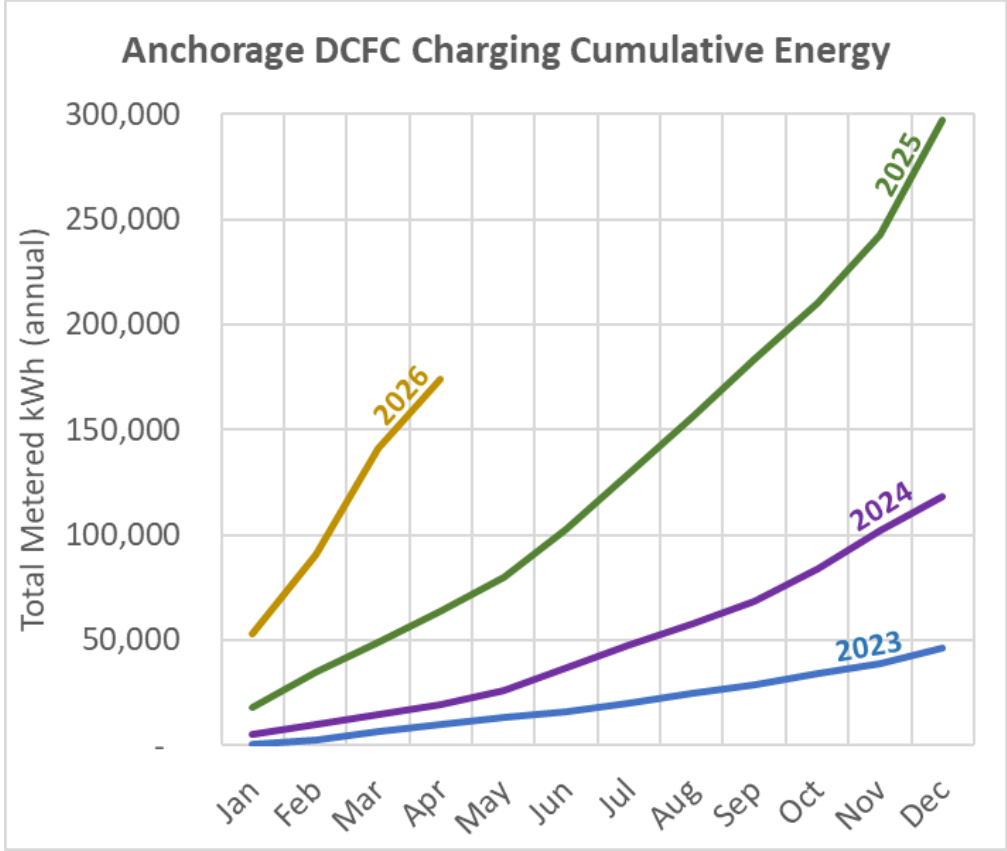
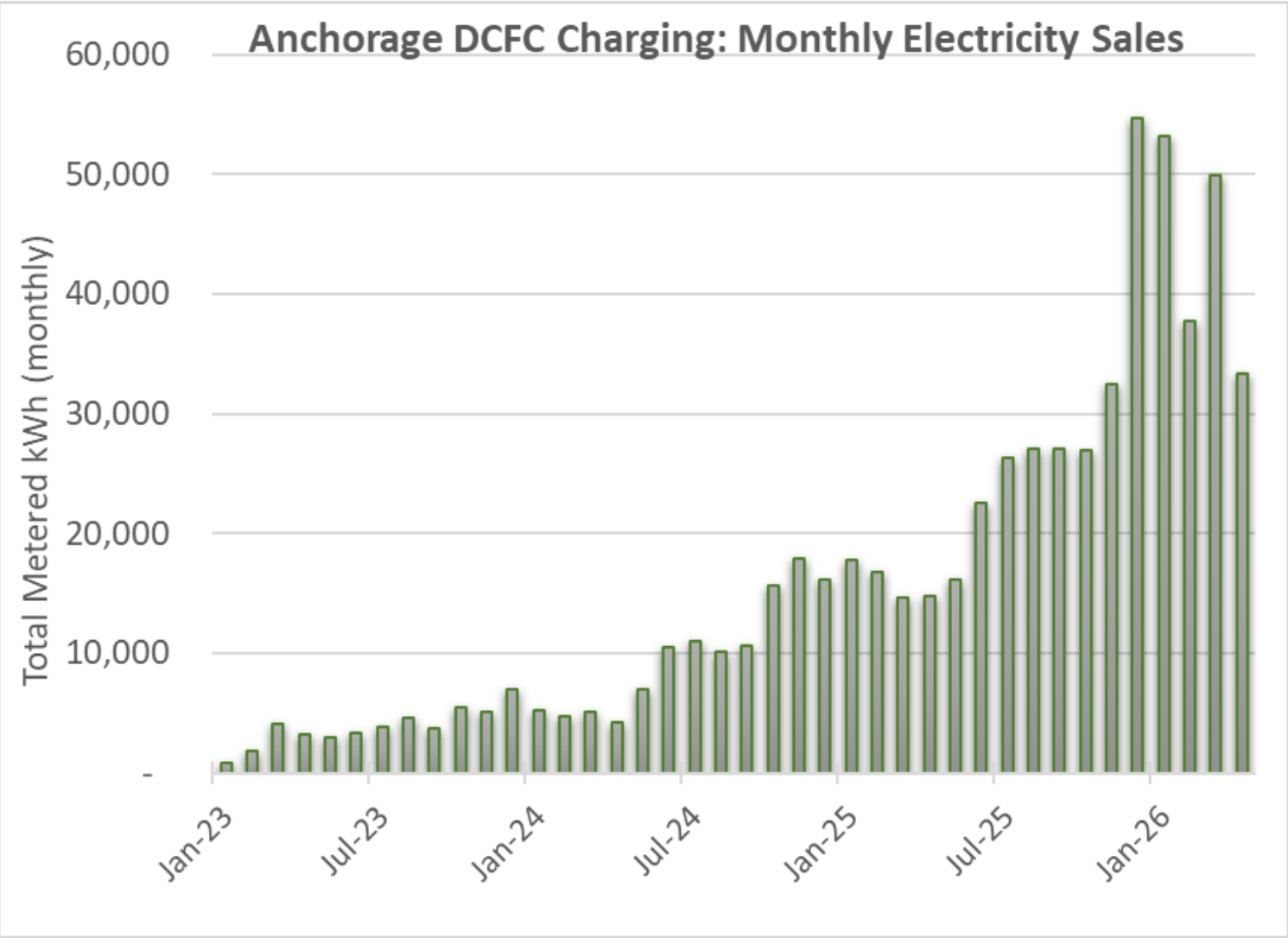


# Overall EV Charging Trends

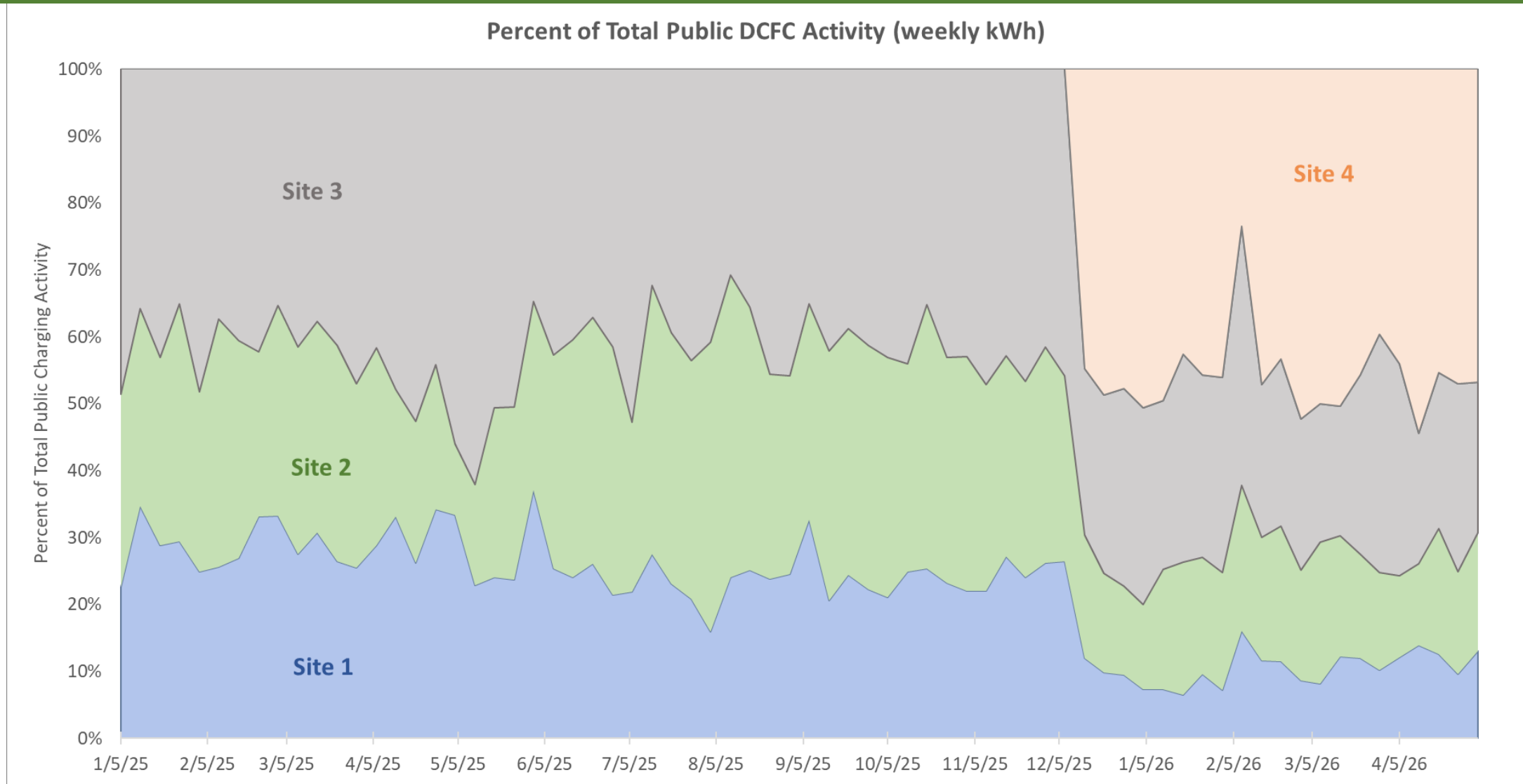
- >90% of EV charging is at home
- Growth of residential EV charging tracks EV adoption (~30%) YoY
- Growth of public EV charging significantly outpaces EV adoption (80 – 240%) YoY
- Significant pent-up demand for public charging



# Public DCFC Charging Activity



# Public DCFC Charging Activity



# Active Projects

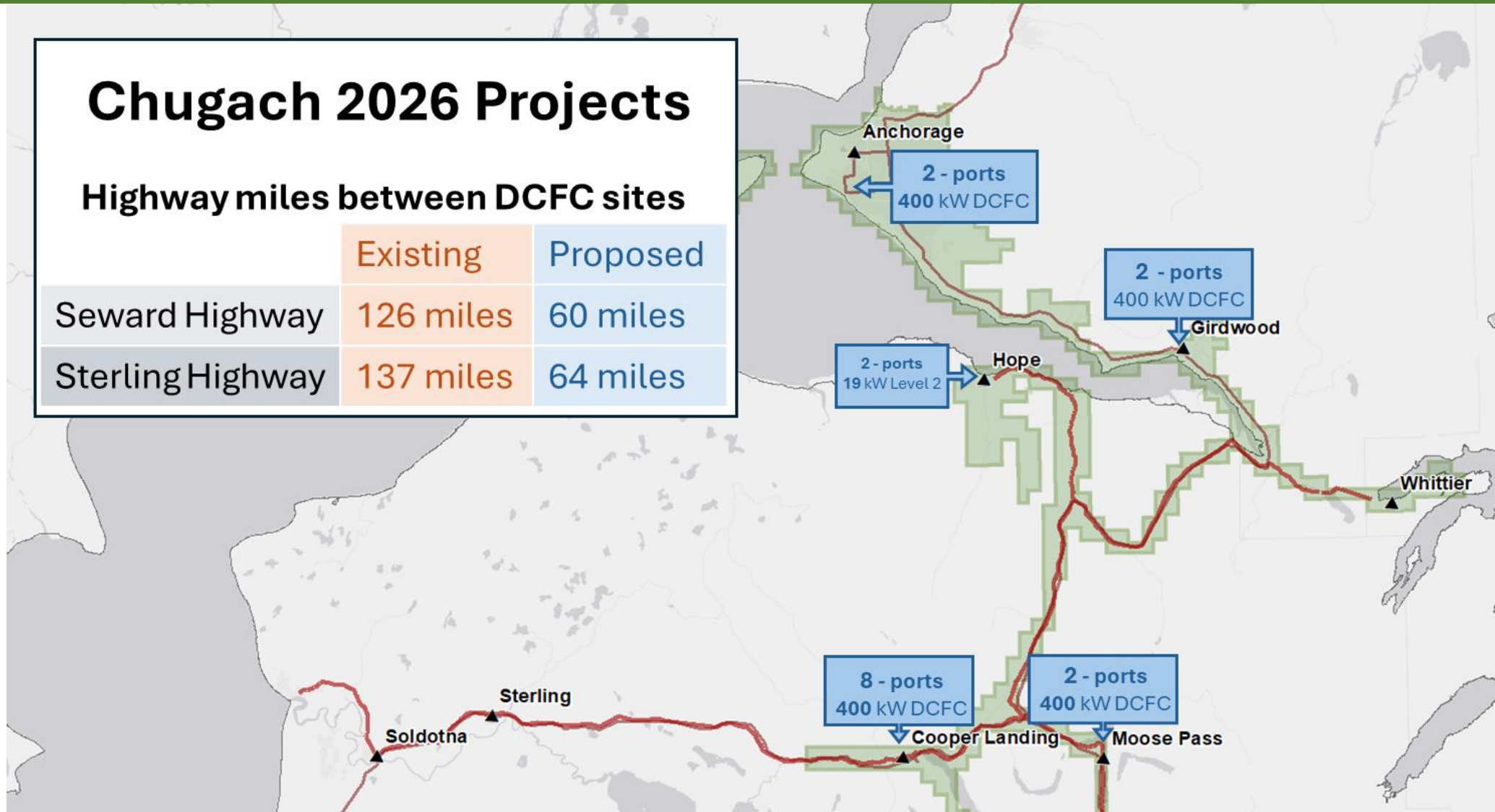
hyc400

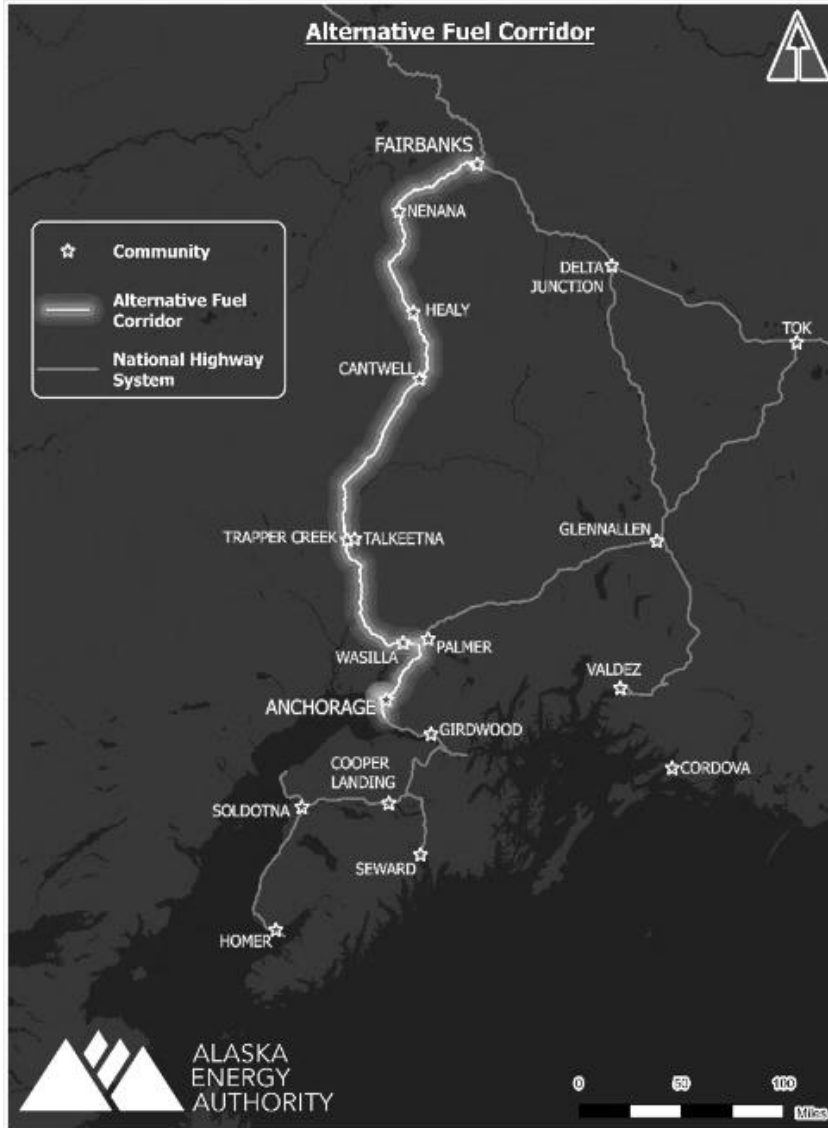


## Chugach 2026 Projects

Highway miles between DCFC sites

	Existing	Proposed
Seward Highway	126 miles	60 miles
Sterling Highway	137 miles	64 miles





# NEVI Overview

Alaska has received certification for the Alternative Fuel Corridor, opening the door to support for charging infrastructure beyond the highway from Anchorage to Fairbanks.



## Phase 1

- 9 sites originally selected
- Tesla sites constructed
- FHWA requirements met

## Phase 2

- Enables siting beyond AFC
- Reduces requirement for power delivery at off corridor sites
- Does not limit infill of AFC

## Funding Recission

- Formula reapportionment reduced Alaska's allocation by \$14M to \$37.5M

## Phase 2 and Next Steps

---

- Focus on **additional highways** and **AMHS**, as well as community and destination charging where applicable
- Emphasize **charging gap** reduction & support **transport** of EVs by ferry
- Apply **lessons learned** from Phase 1 to streamline procurement, contracting, and construction
- Reduce interconnection delays and mitigate concerns through **utility coordination**
- Leverage **EV community** for siting prioritization



To meet continued growth and interest in EVs, our goal is to support a reliable, accessible, and resilient statewide charging network.

# Around the Room Updates

---





# Alaska Energy Authority

---

813 W Northern Lights Blvd.  
Anchorage, AK 99503



Main: (907) 771-3000  
Fax: (907) 771-3044



[akenergyauthority.org](http://akenergyauthority.org)



[@alaskaenergyauthority](https://www.facebook.com/alaskaenergyauthority)



[@alaskaenergyauthority](https://www.linkedin.com/company/alaskaenergyauthority)

