



ALASKA
ENERGY
AUTHORITY

Alaska Bulk Fuel Aggregation Study

Executive Summary

Public Review Draft, September 9, 2026

The Study Question

Could aggregating some or all bulk fuel facility functions help facilities last longer, reduce spills, lower costs, and make better use of limited state and federal investment?

The Answer

Yes. Working together can save money. Of the aggregation approaches evaluated, a **regional cooperative model** offers the greatest potential for savings while allowing communities to retain local ownership and control.

Origins of the Study

**Spring
2024**

The Denali Commission facilitated a Bulk Fuel Summit at Alaska Municipal League's Infrastructure Symposium. The objective was to identify how to address the estimated \$1 billion needed to repair and rebuild critical bulk fuel infrastructure around Alaska. Tribal leaders, federal and state agencies, policymakers, project developers, fuel distributors, electric utilities, investors, and others joined. Participants agreed there was a need to explore if aggregation could generate cost savings to help bridge the gap between the overwhelming need for bulk fuel infrastructure investment and available funding.

**Summer
2024**

Alaska Energy Authority initiated the Study and hired a contractor team.

**Fall
2024**

The Bulk Fuel Aggregation Study officially kicked off at the Alaska Energy Conference Bulk Fuel Summit in Fairbanks.

Study Inputs

Statewide Survey

Over 200 responses to an online survey conducted in spring 2025.

Study Advisory Groups (SAGs)

An Owners & Operators SAG and a Regulators & Supporters SAG informed the study approach via meetings and outreach.

Alaska Bulk Fuel Aggregation Study

Literature Review & Aggregation Case Studies

A detailed review of plans, studies, and reports to identify best practices, lessons learned, new ideas, and inspiration for the aggregation models.

Events

In person and virtual gatherings ranging from quarterly teleconferences to the Alaska Municipal League Local Government Conference.

Interviews & Small Group Discussions

A series of 26 interviews and 3 discussions with capacity builders, technical assistance providers, owners and operators, community/regional organizations, and cooperatives.

Tank Farms Today: By the Numbers

FUNDING GAP



\$500 Million

invested in tank farms by state and federal funders over the past 30 years

\$1 Billion

estimated amount currently needed to address critical deficiencies

FACILITY AGE



20-30 yrs

expected life span of a tank farm

40 yrs

average age of Alaska tank farms

FACILITIES AT RISK



≈ 50%

of Alaska tank farms at risk of flooding, erosion, or permafrost-related failure

Source: Alaska Energy Authority and the Denali Commission, as of August 2026

What We Heard: Participant Feedback

Biggest Challenges to Current Bulk Fuel Operations and Infrastructure 209 responses

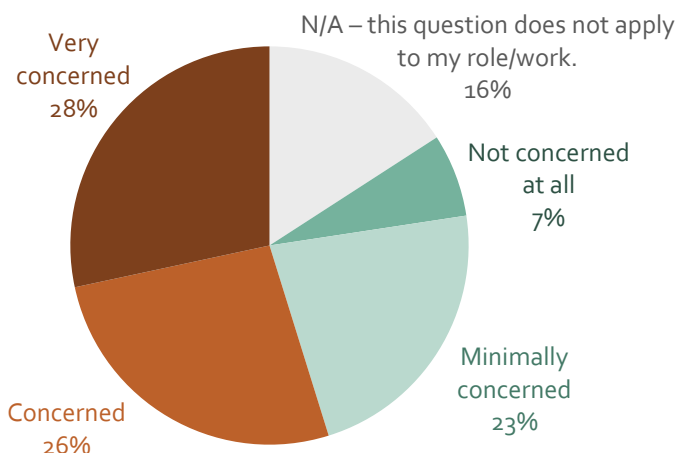
- #1** High cost of bringing fuel into remote communities (77% of respondents)
- #2** Keeping up with tank maintenance, repairs, and replacement (57%)
- #3** Rural residents cannot afford the true cost of fuel and fuel operations (57%)
- #4** Environmental risks (erosion, flooding, and/or melting permafrost) (42%)
- #5** Hard to build savings for regular maintenance costs, bulk fuel purchasing, emergencies (37%)

Biggest Potential Benefits of Aggregation 160 responses

- #1** Better maintained facilities that last longer and need fewer major repairs (68% of respondents)
- #2** Better rates for fuel purchases (66%)
- #3** Better training, information sharing, and more efficient operations (48%)
- #4** Lower costs for repairs and maintenance (39%)
- #5** Reduces spill risks, improves community safety (32%)

More than 50% of Participants are Concerned or Very Concerned about the Safety of Bulk Fuel Facilities

Question: For the communities you work with, overall, how concerned would you say community members are with the potential impact of bulk fuel facilities infrastructure on the health and safety of their community (people, lands, waters)? 208 responses



Aggregation Also Offers Non-Monetary Benefits

✓ Workforce Capacity & Knowledge Sharing Centralized approaches reduce dependence on a single community's ability to recruit, train, and retain qualified operators and administrators.	✓ Access to Specialized Expertise Aggregation gives smaller and remote communities greater access to technical, regulatory, maintenance, engineering, and administrative expertise.	✓ Increased Resilience to Environmental Disasters Aggregation could provide redundancy, shared personnel/equipment, and response capacity following natural disasters.
✓ Operational Consistency & Standardization Increasing aggregation allows greater standardization of procedures, equipment, maintenance, and facility designs.	✓ Maintenance & Asset Management More integrated models allow maintenance and capital planning to become proactive and systematic.	✓ Operational Reliability & Risk Reduction Pooling capacity reduces vulnerability to turnover, deferred maintenance, equipment failures, and interruptions in essential service.

What We Learned: Sampling of Key Findings from Financial Analysis

	Small Facility <25,000 gal annually	Medium Facility 25-50,000 gal annually	Large Facility >50,000 gal annually	Costs decrease as aggregation increases
Status Quo-average price charged today	\$7.68	\$7.68	\$7.68	
Status Quo-if operators adequately charge for operations, maintenance	\$11.51	\$11.46	\$11.42	
Collaborative Partnerships	\$10.74	\$10.70	\$10.65	
Regional Cooperative	\$9.71	\$9.68	\$9.66	
Consolidated Ownership	\$9.65	\$9.62	\$9.61	

Costs go down as facility size increases



What Aggregation
Scenarios Were
Considered?

What Do We
Recommend?

Status Quo	Collaborative Partnerships	Regional Cooperative	Consolidated Ownership
Assumes no changes to current ownership or management.* *Will consider the continued trend of decreased funding availability and related anticipated cost increases.	Tank farm owners contribute to a centralized new or existing entity that coordinates fuel purchasing, training, maintenance, and knowledge sharing.	Everything is aggregated except for tank farm ownership. Recommended	All tank farm ownership and maintenance is aggregated.

THE DETAILS – Aggregation features in each scenario. Options listed at the top had the highest support in the survey.

A. Expanded training for owners, operators, and administrators/ managers	-	✓	✓	✓
B. Standardization of parts and facility design	-	-	✓	✓
C. Centralized maintenance and training	-	✓	✓	✓
D. Centralized facility repair and replacement	-	-	✓	✓
E. Centralized access to technical resources and technicians	-	-	✓	✓
F. Centralized ways to share knowledge such as mentor and peer networks	-	✓	✓	✓
G. Centralized fuel purchasing and delivery	-	✓	✓	✓
H. Building ongoing maintenance and training costs into the price of fuel	✓	✓	✓	✓
I. Centralized administration, operations, and bookkeeping	-	✓	✓	✓
J. Centralized tank farm ownership	-	-	-	✓

✓ = includes this option "-" = not available

Read on for the full set of recommendations and next steps

Study Recommendations

#1

Advance Regional Cooperatives as the Preferred Model for Bulk Fuel Aggregation

Advance the regional cooperative model for further development and implementation because it captures nearly all the modeled financial benefits of consolidated ownership (lower expenses, extended facility life) while preserving local ownership, participation, and control.

#2

Pursue Aggregation Strategies Rather Than Continued Reliance on the Status Quo

Tank farm owners and operators and partners should pursue opportunities to aggregate bulk fuel functions rather than relying solely on the existing community-by-community model. The financial analysis indicates that all three aggregation scenarios outperform the status quo, although the magnitude of savings vary by model.

#3

Establish Sustainable Rates & Reserves for Facility Maintenance, Repair, & Replacement

Tank farm owners and operators should establish rate structures and reserve practices that adequately account for the long-term costs of maintenance, major repairs, and eventual facility replacement.

#4

Standardize and Share Tank Farm Financial and Operating Data

Partners involved in rural bulk fuel infrastructure should develop a common framework for collecting, categorizing, and sharing key tank farm financial data. Consistent definitions and reporting practices would improve comparability among facilities, support better decision-making, strengthen future financial analysis, and provide a more reliable information base for evaluating and implementing aggregation opportunities.



Where Do We Go From Here?

We recommend a next phase to define the details of implementation. The following questions should be considered:

TRANSITION & IMPLEMENTATION

- ☐ What steps are needed to transition from the current community-by-community model to an aggregated model?

GOVERNANCE, ROLES, & PARTICIPATION

- ☐ Who should lead development and implementation of regional cooperatives?

FINANCIAL FEASIBILITY & SUSTAINABILITY

- ☐ What are the estimated startup and transition costs associated with establishing a regional cooperative?
- ☐ What potential funding sources exist to cover the startup costs associated with aggregation?

EQUITY & REGIONAL DIFFERENCES

- ☐ How should a regional cooperative account for differences in the condition, value, liabilities, and remaining useful life of facilities when communities enter the cooperative?

RESILIENCE, OPERATIONS, & CAPACITY

- ☐ How could a regional cooperative strengthen preparedness, response, and recovery from natural disasters, spills, equipment failures, fuel delivery disruptions, and other emergencies?