



CHUGACH ELECTRIC ASSOCIATION, INC.
ANCHORAGE, ALASKA

OPERATIONS COMMITTEE MEETING

AGENDA

Mark Wiggin, Chair
Jim Nordlund, Vice Chair

Sisi Cooper, Director
Bettina Chastain, Director
Sam Cason, Director

September 06, 2023

4:00 p.m.

Chugach Board Room

- I. CALL TO ORDER (4:00 p.m.)
 - A. Roll Call
- II. APPROVAL OF THE AGENDA* (4:05 p.m.)
- III. APPROVAL OF THE MINUTES* (4:10 p.m.)
 - A. July 12, 2023 (Hamilton)
- IV. PERSONS TO BE HEARD (4:15 p.m.)
 - A. Member Comments
- V. NEW BUSINESS (scheduled) (4:20 p.m.)
 - A. NREL Wind Integration Modeling (Schwarz) (4:20 p.m.)
 - B. Eklutna Project (Owen, Brodie) (5:05 p.m.)
 - C. B&V Gas Supply Update (Rudeck/Gerlek/Thompson/Armfield) (5:20 p.m.)
 - D. Gas Storage (PRA/Armfield) (5:50 p.m.)
- VI. EXECUTIVE SESSION* (scheduled) (6:20 p.m.)
 - A. Eklutna Project (Owen, Glass, Brodie)
 - B. B&V Gas Supply Update (Rudeck/Gerlek/Thompson/Armfield)
 - C. Gas Storage (Findley)
- VII. DIRECTOR COMMENTS (7:45 p.m.)
- VIII. ADJOURNMENT* (8:00 p.m.)

* Denotes Action Items

** Denotes Possible Action Items

8/31/2023 4:50:04 PM

CHUGACH ELECTRIC ASSOCIATION, INC.
Anchorage, Alaska

July 12, 2023
Wednesday
4:00 p.m.

OPERATIONS COMMITTEE MEETING

Recording Secretary: Ky'yanna Hamilton

I. CALL TO ORDER

Chair Wiggin called the Operations Committee meeting to order at 4:03 p.m. in the boardroom of Chugach Electric Association, Inc., 5601 Electron Drive, Anchorage, Alaska.

A. Roll Call

Committee Members Present:

Mark Wiggin, Chair
Jim Nordlund, Vice Chair
Bettina Chastain, Director
Sisi Cooper, Director
Sam Cason, Director

Board Members Present:

Susanne Fleek-Green, Director (*Via Telephonic*)
Rachel Morse, Director

Guests and Staff Attendance

Present:

Arthur Miller	Kate Ayers	Scarlett Masten
Sherri Highers	Sean Skaling	Hans Thompson
Matthew Clarkson	Steve Padula, HRS	Teresa Kurka
Andrew Laughlin	Samantha Owen,	Mike Brodie
Allan Rudeck	Mcmillion	Steve Gerlek
Bernie Smith	Randal Chicola	Sean Ellenson, McMillion
Julie Hasquet	David Caye	Jonas Banta, AKC
Emily Muller	Bob Butera, Member	Todd Glass, WSGR
Bart Armfield	Eugene Ori	Steve Gerlai, LSC

Via Teleconference:

Ashton Doyle	Curtis Sims	Donovan Russoniello,
Deborah Gardino	Brenda Hewitt,	Member
Eugene Ori	Member	
Sandra Cacy		

II. APPROVAL OF THE AGENDA

Director Morse moved, and Director Cooper seconded the motion to approve the agenda. The motion passed unanimously.

III. APPROVAL OF THE MINUTES

Director Chastain moved, and Director Cooper seconded the motion to approve the June 21, 2023, Operations Committee Meeting minutes. The motion passed unanimously.

IV. PERSONS TO BE HEARD

A. Member Comments

Chugach Members, Bob Butera, Donovan Russoniello, Jonas Banta, and Bernie Smith addressed the Board with comments on Energy Reliability and affordability, and the Eklutna Restoration Project.

V. NEW BUSINESS

A. Review Board Policy 206 – Statement of Functions of the Operations Committee (Committee)

Board Policy 206 was provided in the meeting packet.

B. Recap and Review of 2023 Election Process (Kurka/Miller)

Teresa Kurka, Vice President of Member Services, and Julie Hasquet, Senior Manager of Corporate Communications provided a recap of the 2023 Election, Member appreciation event and annual meeting and responded to questions from the committee.

C. Renewable Energy Plan (Skaling)

Sean Skaling, Senior Manager of Business and Sustainability Program Development presented and discussed the sustainability report and responded to questions from the committee.

D. Eklutna Project (Brodie/S. Owens)

Mike Brodie, Manager of Maintenance and Operations and Samantha Owen, McMillion gave an update on the Eklutna River Project and responded to questions from the committee.

VI. EXECUTIVE SESSION

A. Gas Supply Update (Rudeck/Gerlek/Thompson)

B. May 1, 2023 – April 30, 2024 CEO Project Specific Initiatives and Priority Areas (Miller/Board)

At 6:01 p.m., Director Cason moved and Director Cooper seconded the motion that pursuant to Alaska Statute 10.25.175(c)(1), (3) and (4), the Operations Committee go into executive session to: 1) discuss and receive reports regarding matters the immediate knowledge of which would clearly have an adverse effect on the finances of the cooperative; 2) discuss with its attorneys matters the immediate knowledge of which could have an adverse effect on the legal position of the cooperative; and 3) discuss personnel matters. The motion passed unanimously.

The meeting reconvened in open session at 7:52 p.m.

VII. DIRECTOR COMMENTS

Comments were made at this time.

VIII. ADJOURNMENT

At 8:02p.m., Director Cason moved, and Director Nordlund seconded the motion to adjourn. The motion passed unanimously.



CHUGACH ELECTRIC ASSOCIATION, INC.
ANCHORAGE, ALASKA

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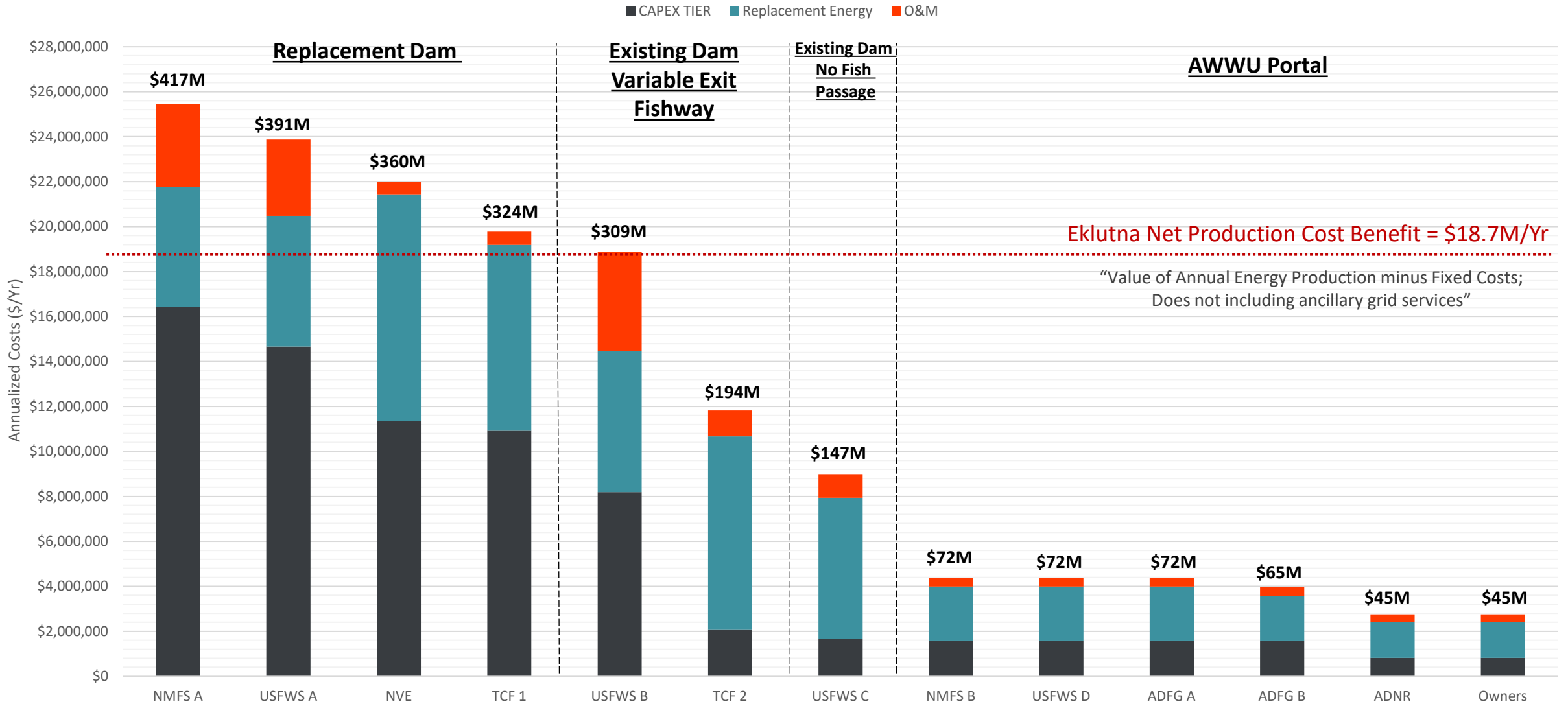
Eklutna Fish & Wildlife Program Chugach BOD Meeting

September 6, 2023

Stakeholder Engagement

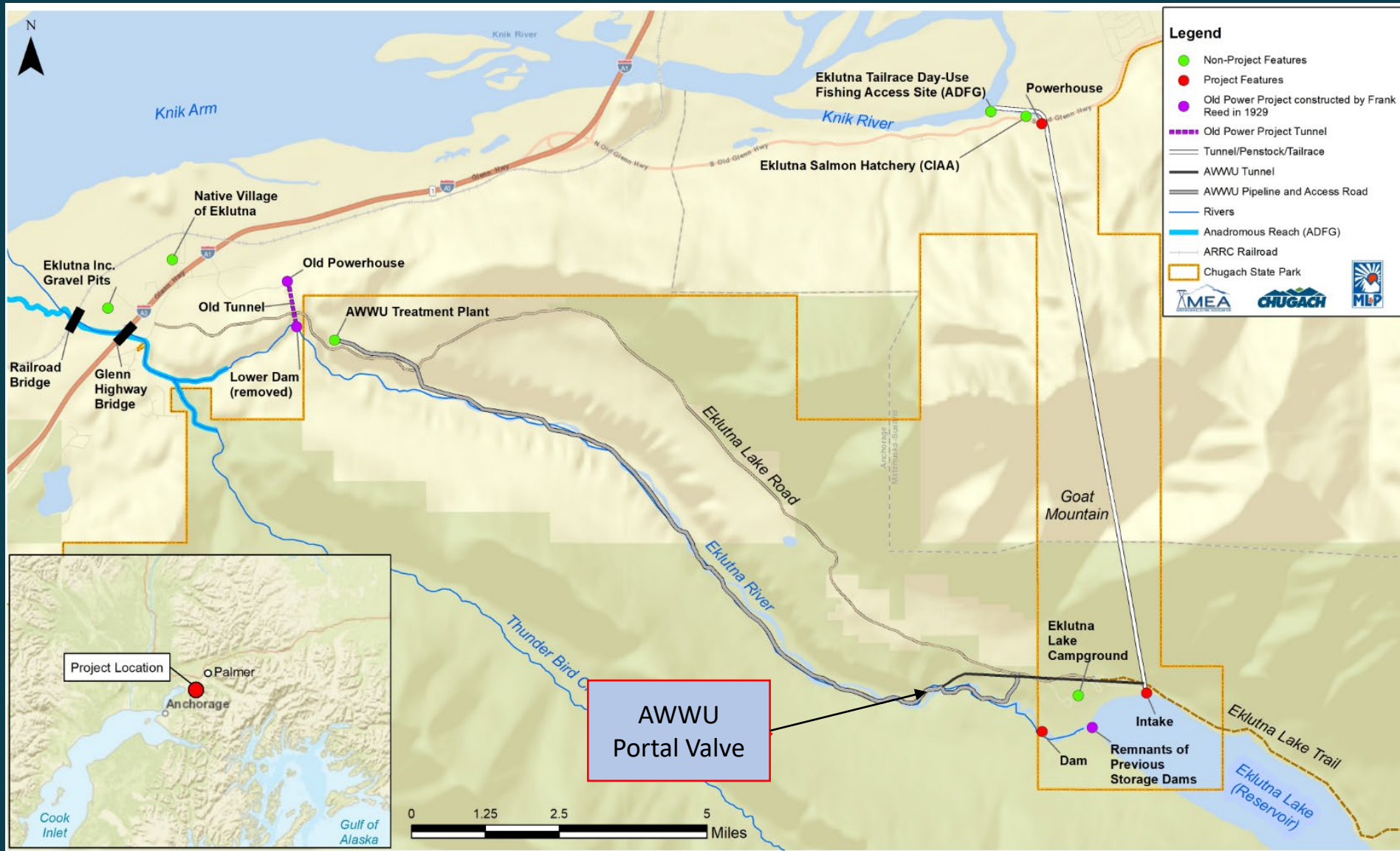
- Alaska Department of Fish and Game
- Alaska Department of Environmental Conservation
- Alaska Department of Natural Resources
 - Water Section (Water Rights, Dam Safety)
 - Chugach State Park
 - Office of History and Archaeology
- Alaska Department of Transportation
- Alaska Railroad Cooperation
- Anchorage Water and Wastewater Utility
- Alaska Pacific University
- National Marine Fisheries Service
- U.S. Fish & Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- Native Village of Eklutna
- Eklutna, Inc.
- Cook Inlet Region, Inc.
- Cook Inlet Aquaculture Association
- Trout Unlimited
- The Conservation Fund
- The Alaska Center

Alternatives Analysis



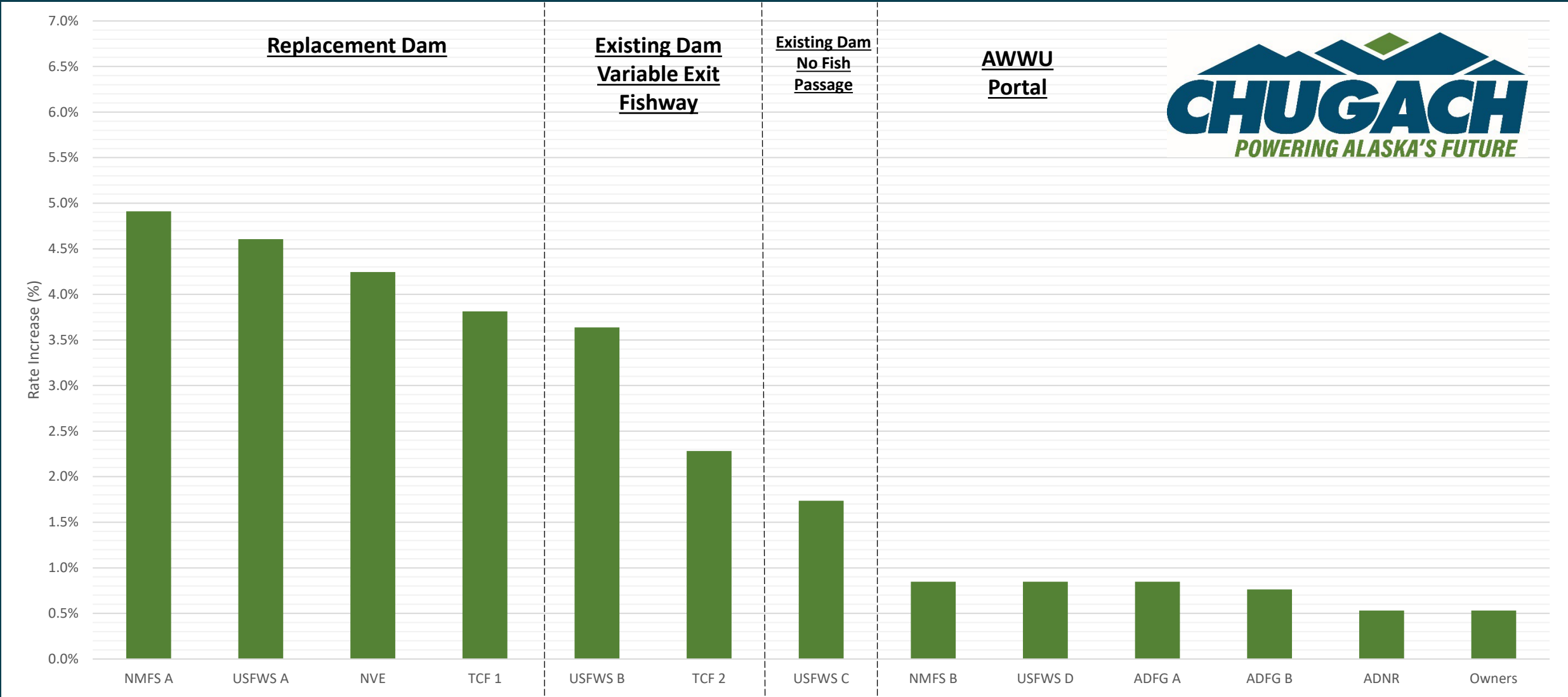
Note: Does not include the social cost of carbon

Vicinity Map





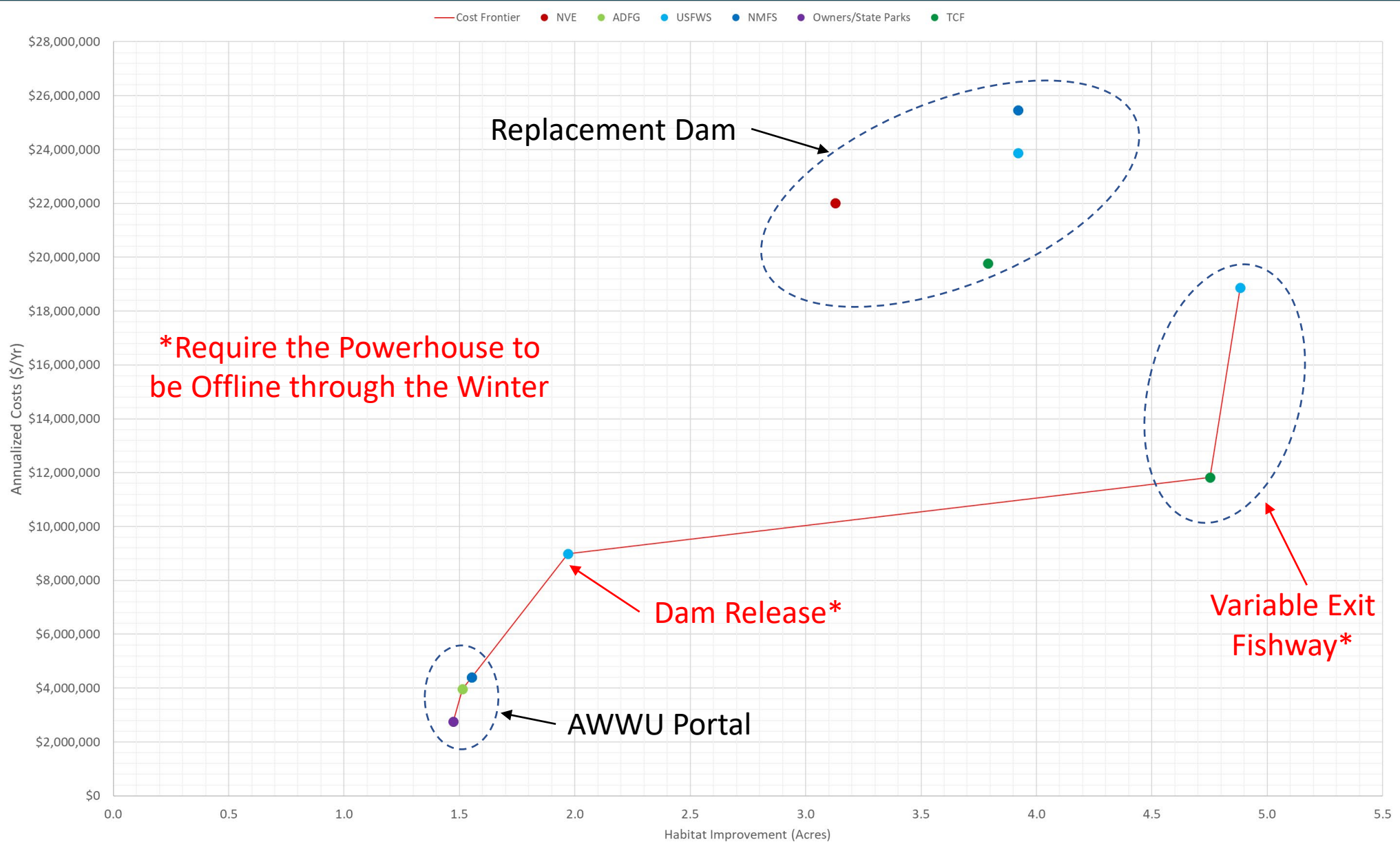
Chugach Electric Ratepayer Impacts



Note: Similar impacts to MEA ratepayers and MOA taxpayers



Cost Effectiveness – Chinook Spawning Habitat



Next Steps

- **October 2023** – Distribute Draft Fish and Wildlife Program
 - Review and comment period
 - Attempt to resolve our differences
- **January 2024** – Public Meetings (Anchorage and Mat-Su Valley)
- **April 2024** – Submit Proposed Final Fish and Wildlife Program
 - 60 days for parties to review and comment
 - 30 days for project owners to respond
 - Allows 2 months for Governor to consider
- **October 2024** – Governor issues Final Fish and Wildlife Program



Chugach Fuel Gas Strategy Operations Committee Meeting

BV Phase 2 update

September 6, 2023

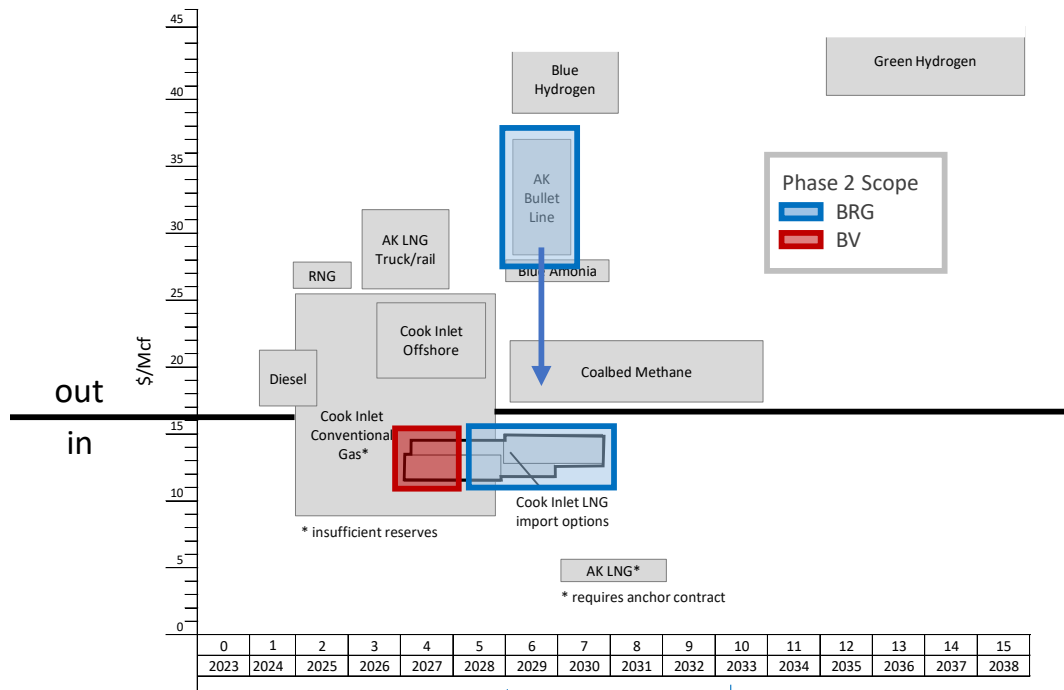
BV and BRG Study Phases

Phase 1 – identify and rank options

Phase 2 – refine best fit solutions

BV 15 bcf Charter FSRU yes/no

BRG 55 bcf multiple options to single FID



Start Date

Enstar contract expires

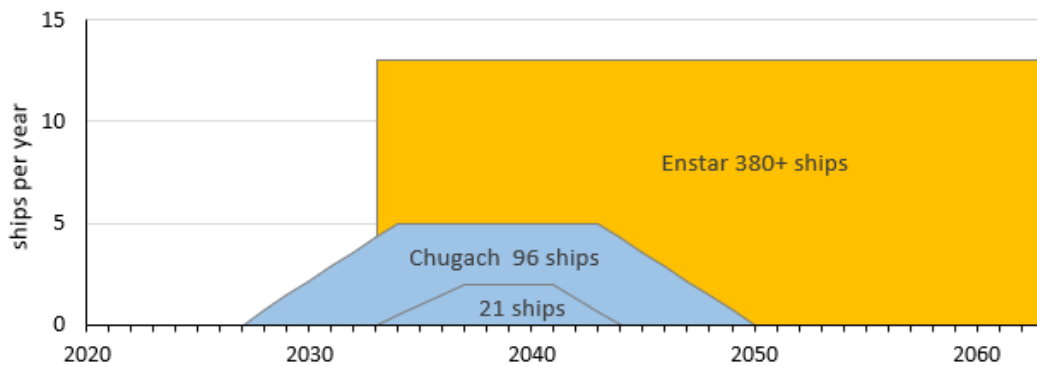
Railbelt consolidated fuel gap begins

Chugach fuel gap begins

LNG Import Options - design criteria

Railbelt	Design	Planning	
Utility Type	Proxy	Fuel Gas Gap	
Electrics	Chugach	64-288 bcf	BV Ph 1 sm-lg
Gas	Enstar	1140 bcf	38 bcfy 2033-30yrs

Cook Inlet Class LNG Tankers (3 bcf) to service the gap



LNG Import Options – solution divergence

Electrics Utility Type

- Complex probabilistic demand profile
- Smaller volumes, decreasing rate
- Seasonal operation may be sufficient
- Transient solution with ramps
- Lower capital, lower commitment

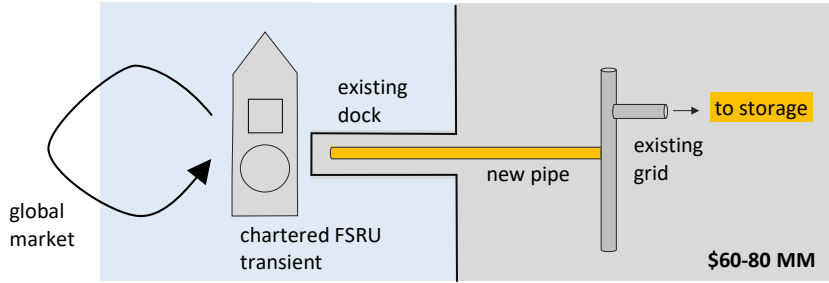
Gas Utility Type

- Simple demand profile
- Larger volumes, steady rate
- Year-round operation may be required
- Permanent long-term solution
- Higher capital, higher commitment

LNG Import Option - configurations

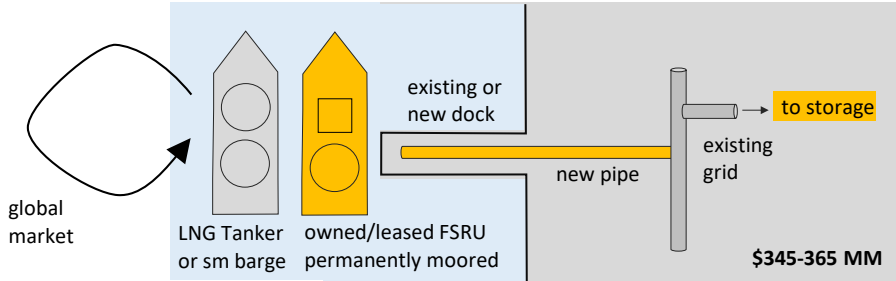
BV Ph 2
yes/no

Chartered FSRU

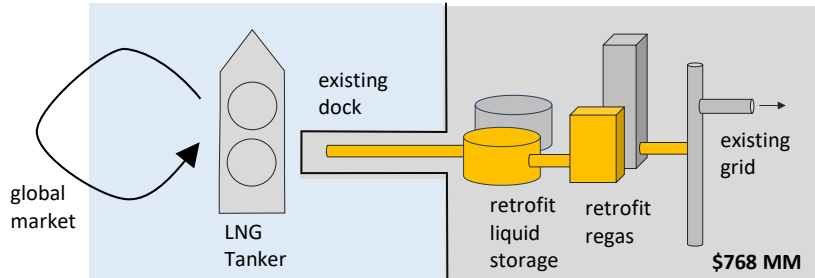


BRG Ph 2
FID best option

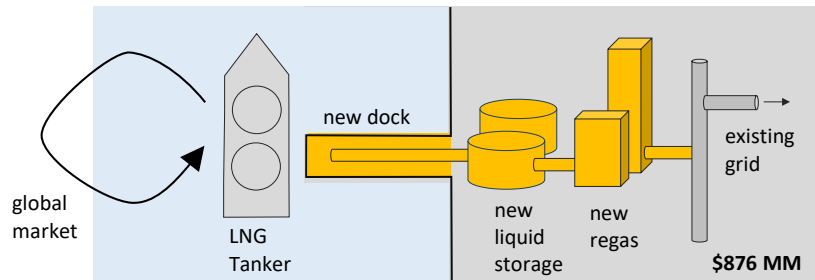
Permanently Moored FSRU



LNG Kenai Retrofit

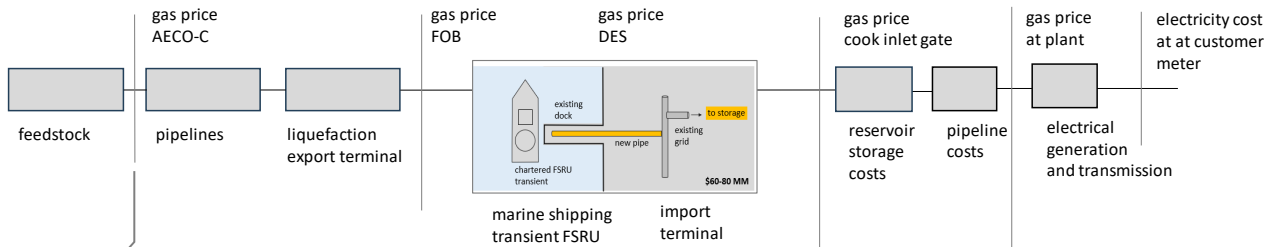


LNG Greenfield



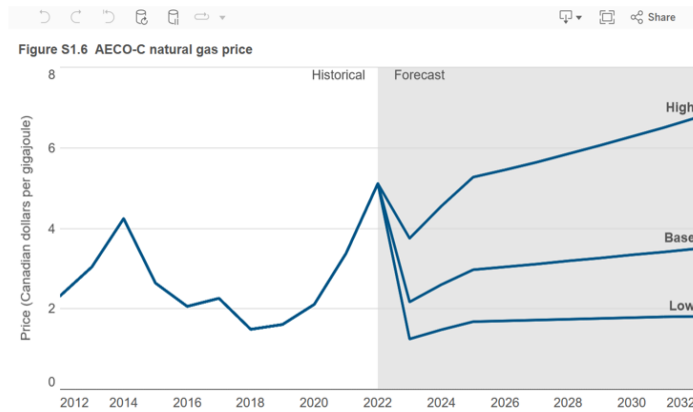
LNG Import Option – supply chain

BV Phase 2 Chartered FSRU



gas price AECO-C

Figure S1.6 shows the historical and forecast AECO-C natural gas price.



Historical values from the *Canadian Gas Price Reporter*.

1.0 Gigajoules (GJ) 947,8171 Cubic feet (cf) natural gas
1.0 Canadian Dollar \$0.74 USD

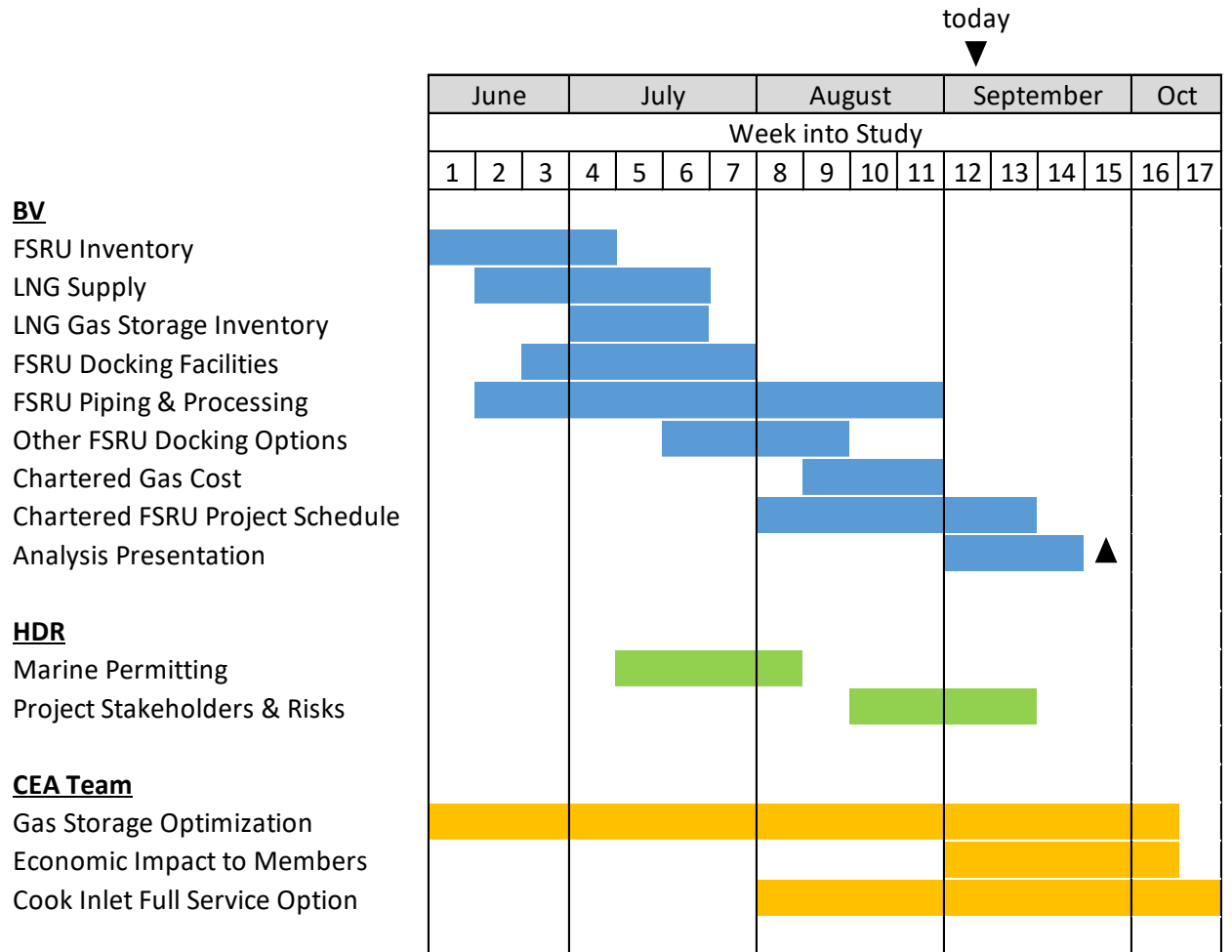
gas price Cook Inlet Gate

BV Phase 1
\$12.6 to \$13.7Mcf

BRG Phase 1
\$12.2 Mcf

BV Phase 2 Study Status

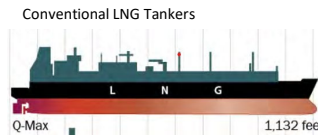
60% complete overall
 No showstoppers yet



Reference

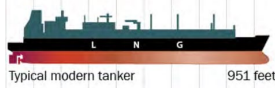
LNG Shipping Options

LNG Liquid Tankers



Ship Capacity

5.5 bcf

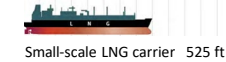


3.5 bcf



Cook Inlet Class
(ice passport)

2.5 bcf



0.4 bcf



LNG Bunker Barge up to 416 feet
smaller vessels are barges towed by tugs

0.2 bcf

FSRU Options

Large FSRU-LNG



Ship Capacity
Regas Rate

3.4 bcf
max 400 mmsfd

small scale FSRU

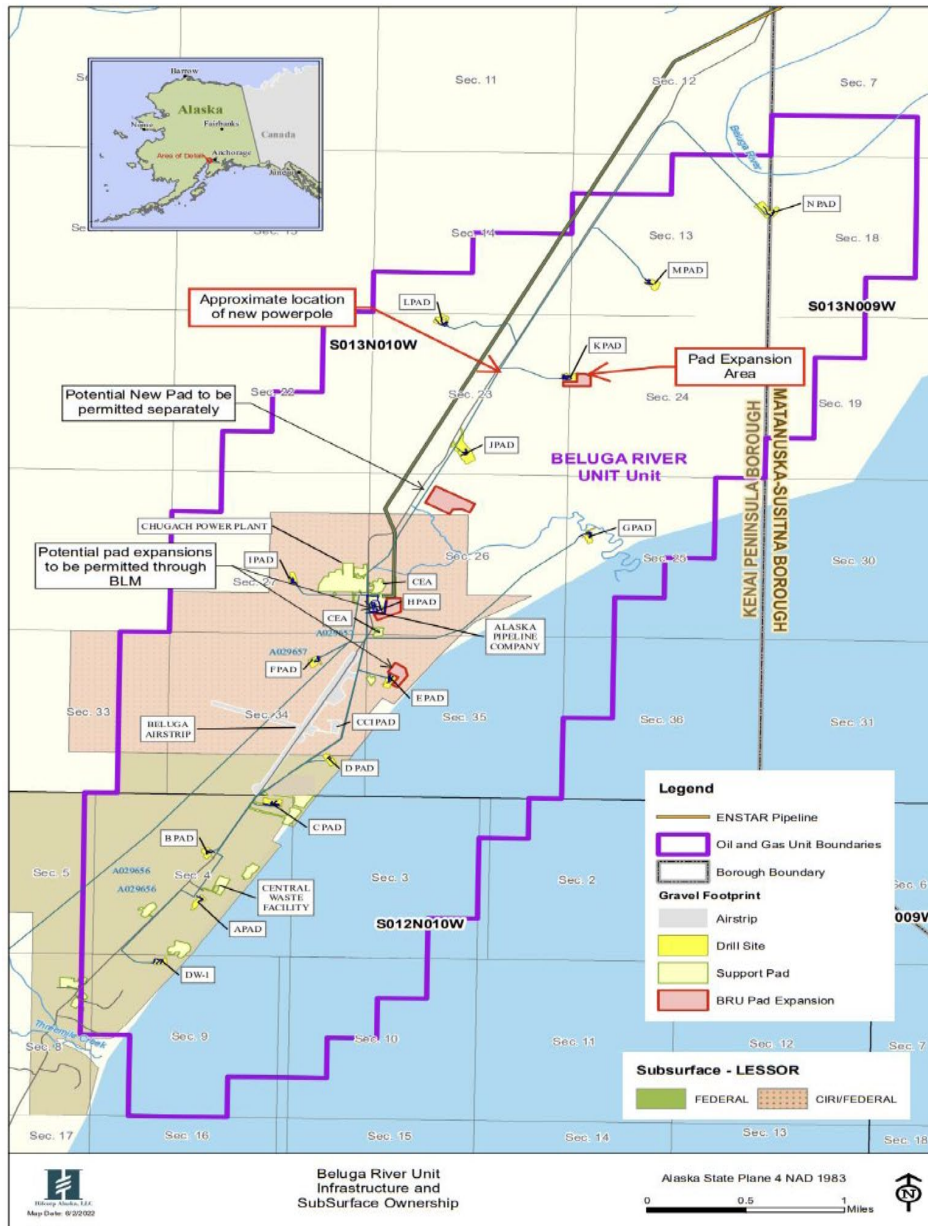


Floating storage plus onboard regasification
smaller vessels are barges towed by tugs

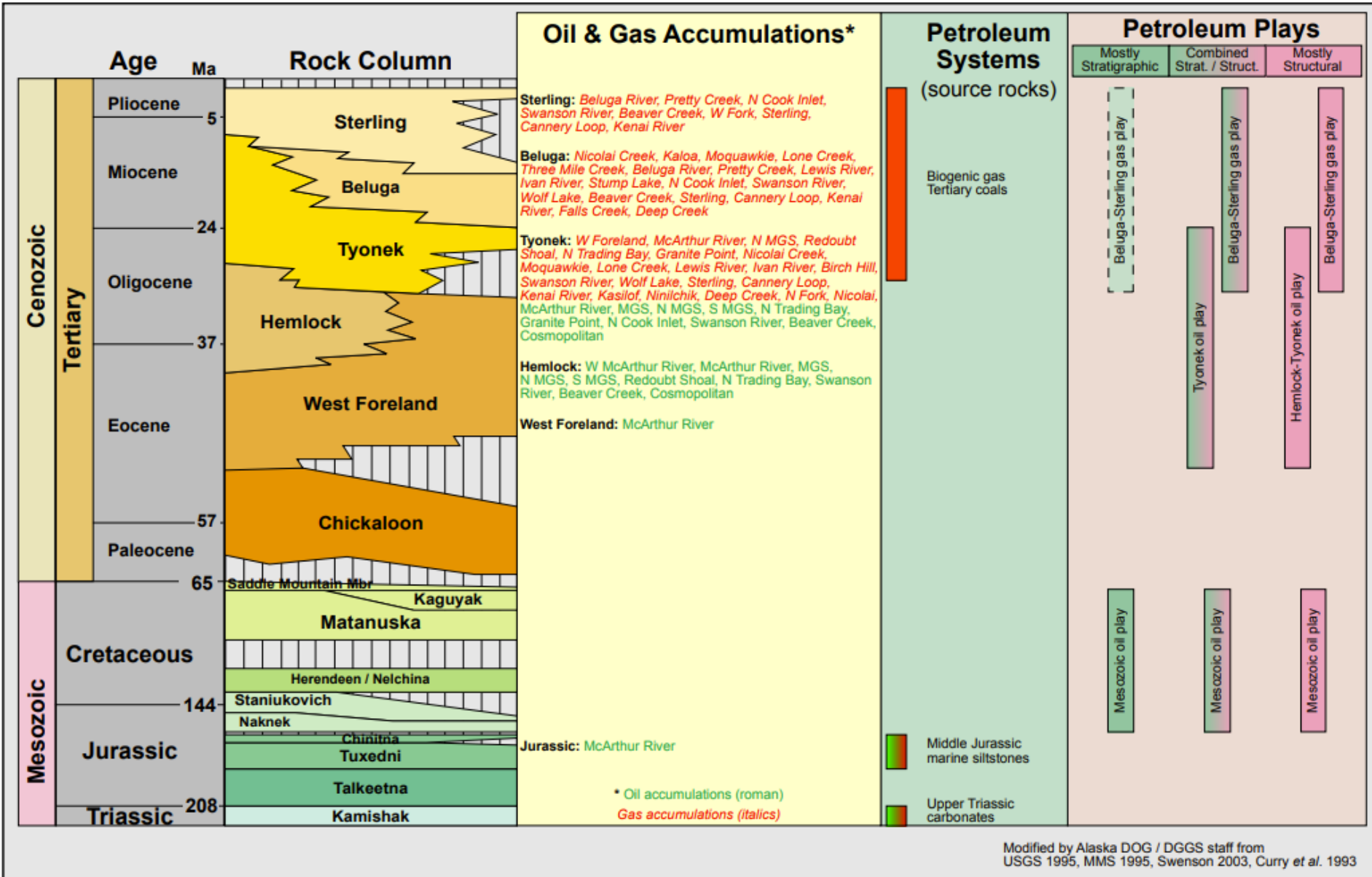
0.1-1.0 bcf
min 50 mmcf/d

BRU Gas Storage Potential

Chugach Operations Committee Meeting
September 6, 2023

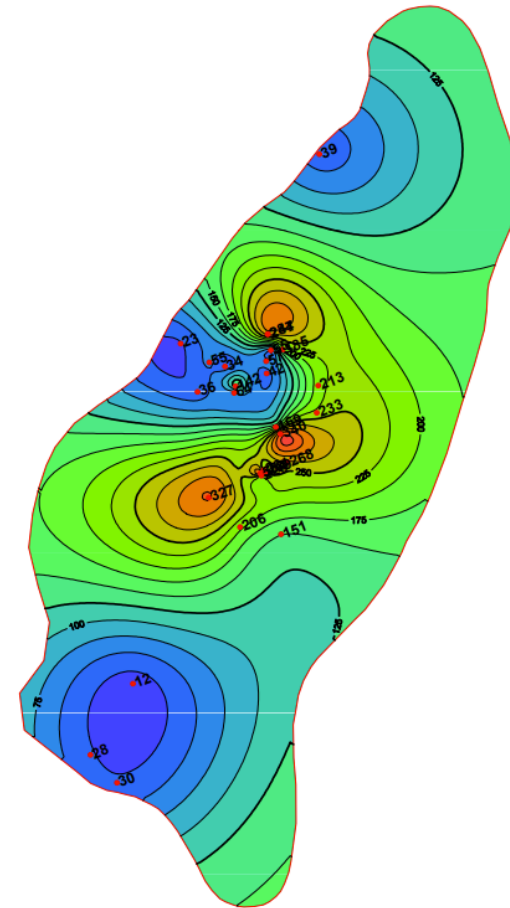


Petroleum System Summary Chart for Cook Inlet for the Cook Inlet Basin



Modified by Alaska DOG / DGGS staff from USGS 1995, MMS 1995, Swenson 2003, Curry et al. 1993

Zonal Gross Pay Isopach Map of Cook Inlet Gas Sand

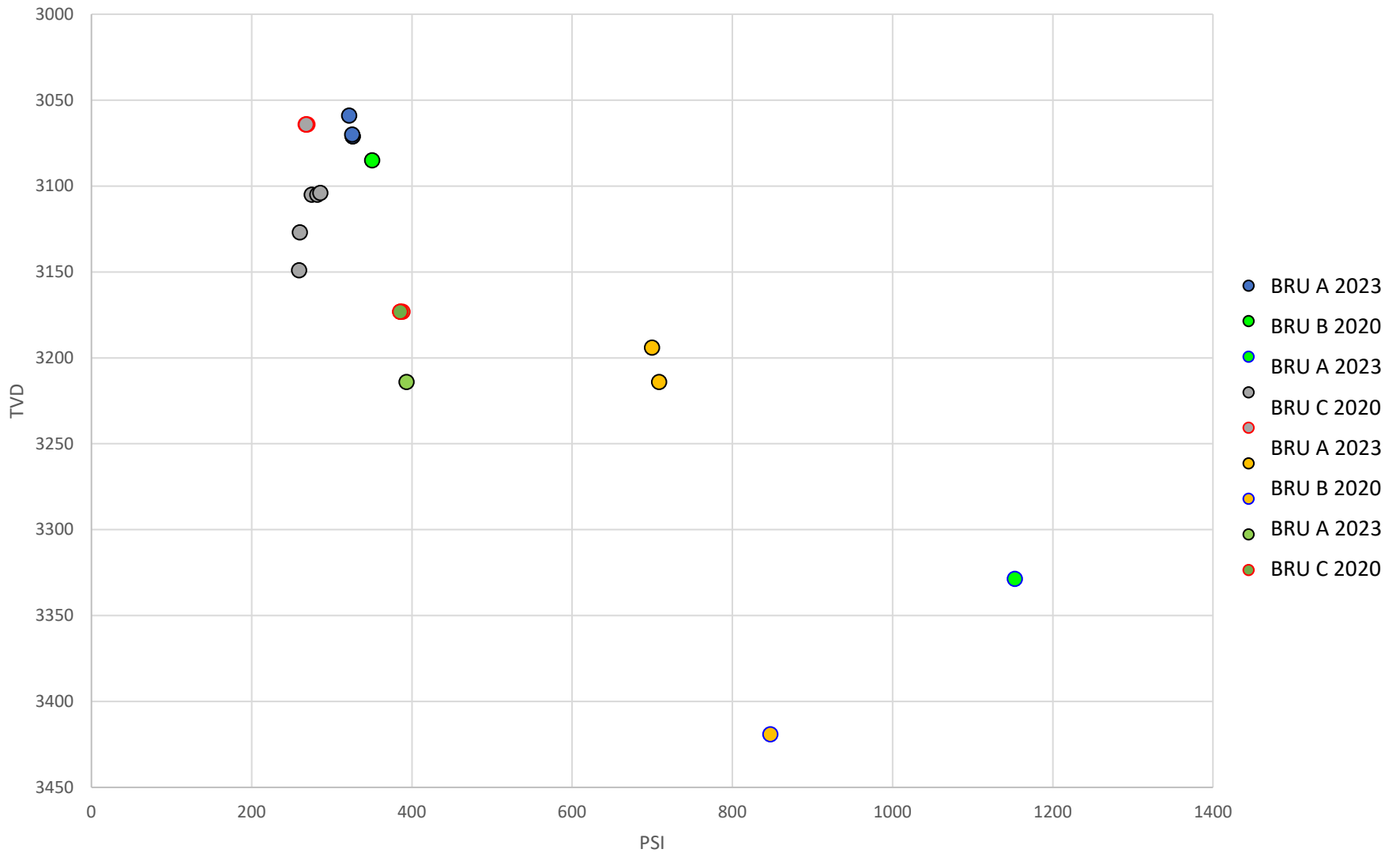


Red dot = gross pay thickness (TVD) for well within zone



Contour Interval = 25 feet

STERLING SAND LWD PRESSURES 2020-2023



Sterling Sand
Allocated
Production
As of 06/23

Sterling Sand - Allocated Production			
Well	Status	Sterling North	Sterling South
BRU #1	Offline		12.52
BRU #2	Offline		4.69
BRU #3	Offline		3.84
BRU #4	Offline	0.85	
BRU #5	Offline	2.25	
Cum		3.1	21.05

Sterling Sand Allocated Production		
Well	Status	Sand
BRU #6	Offline	4.13
BRU #7	Online	15.92
BRU #8	Offline	1.16
BRU #9	Online	1.46
BRU #10	Offline	9.95
BRU #11	Online	0.31
Cum		32.93

Sterling Sand Allocated Production		
Well	Status	Sand
BRU #12	Offline	1.76
BRU #13	Offline	4.36
BRU #14	Offline	0.98
BRU #15	Offline	2.43
BRU #16	Online	2.01
BRU #17	Offline	0.52
BRU #18	Online	1.37
BRU #19	Offline	1.84
Cum		15.27

Conclusions

- Three Sterling sands show potential as BRU gas storage reservoirs with a range of 15-35BCF.
- Production and pressure evaluation add additional support to future drilling locations identified by Chugach Reservoir team's analysis of seismic anomalies.
- The continued acquisition of zonal pressures throughout the Sterling interval with new drilling is imperative to support reservoir analysis of future use in the Beluga River Unit.

Future Steps

- Deeper review of the BRU producing wells in the Sterling sands to identify all wells that have been or can be properly isolated in the respective sands.
- Refinement of the allocated production values for the identified BRU sands through a well history search.
- Review of cement bond logs on all BRU wells passing through the sands.
- Expand the search for gas storage reservoirs to other fields on the west side of Cook Inlet.

Chugach Electric Association, Inc.
Anchorage, Alaska

Summary of Executive Session Topics for
Operations Committee Meeting on September 6, 2023
Agenda Item VI.

- A. Discussion of confidential and sensitive information concerning the Eklutna Project, public disclosure of which could have an adverse effect on the finances and legal position of the Association. (AS 10.25.175(c)(1) and (3))
- B. Discussion of confidential and sensitive information concerning an update of the Black & Veatch Gas Supply, public disclosure of which could have an adverse effect on the finances of the Association. (AS 10.25.175(c)(1))
- C. Discussion of confidential and sensitive information regarding gas storage, public disclosure of which could have an adverse effect on the finances and legal position of the Association. (AS 10.25.175(c)(1) and (3))