

PAME II-2019—Agenda Item 6.2(a)
Assessment of Indigenous and Local Community
Reliance Upon Heavy Fuel Oil (HFO)
Field Survey Final Report

References and Related Information

- Arctic Marine Shipping Assessment (AMSA) Report, 2009
- PAME (II)/17/5.2/a/ii, *HFO Indigenous Use Project Plan Outline and Key Elements (USA, AIA, CCU)*
- SDWG Project Proposal, *Assessing the Use of Heavy Fuel Oil (HFO) in Indigenous Communities (USA, AIA, CCU) (24 January 2018)*
- PAME II-2017 RoDs (“*PAME approves the project plan outline and key elements contained in the paper submitted to PAME II-2017 and looks forward to SDWG’s decision to partner on the project. PAME requests that States and PPs identify a point of contact for this project by 15 October. PAME invites its members to submit any information they may have by 15 December relevant to this project.*”)
- PAME Work Plan (2017-2019) (“*A project in partnership with the Sustainable Development Working Group (SDWG) (subject to SDWG to confirmation) to collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO as well as the extent to which such peoples and communities rely on ships that burn HFO to deliver supplies and provisions.*”)
- PAME (I)/18/6.2/a/ii (Draft Field Survey for HFO Phase IV(b) Project)
- PAME I-2018 RoDs (“*PAME approves the draft field survey developed by the USA/AIA/CCU and invites its translation and distribution as soon as practicable via the Permanent Participants to indigenous and local communities after approval by SDWG. PAME advises that a layperson definition of HFO be appended to the survey. The project co-leads anticipate compiling and synthesizing the responses in a draft report to be submitted to PAME II-2018 and the second SDWG meeting of 2018.*”)
- PAME (II)/18/6.2/a/ii, *Status Update by USA, AIA, CCU*
- PAME I-2019 RoDs (Annex I: Projects for inclusion into PAME Work Plan (2019-2021))
- PAME Work Plan (2019-2021) (“*The objective is to develop a report summarizing the information collected in a field survey in 2018 and 2019 about on-shore use of heavy fuel oil (HFO) by Indigenous peoples and local communities, as well as the extent to which such peoples and communities rely on ships that burn HFO to deliver supplies and provisions. Consideration of a report to the 7th session of the IMO’s Sub-committee on Pollution Prevention and Response (PPR) by one or more Arctic States.*”)

Background

PAME II-2017 added four projects concerning HFO use in the Arctic to PAME’s 2017-2019 Work Plan, including the following:

“A project in partnership with the Sustainable Development Working Group (SDWG) (subject to SDWG confirmation) to collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO as well as the extent to which such peoples and communities rely on ships that burn HFO to deliver supplies and provisions.”

The goal of this project is to provide a greater understanding of the importance of HFO to Arctic communities. As States at the International Maritime Organization consider phasing out the use of HFO as fuel by ships in the Arctic to protect the marine environment, it was important to understand whether such actions might have unintended economic and social impacts on Arctic residents. By surveying Arctic communities and asking how they generate electricity, heat their homes, and move goods in and out of their communities, this project is intended to help States make better-informed decisions regarding the regulation of HFO use by ships in the Arctic.

In the fall of 2017, the project co-leads developed a set of draft survey questions aimed at assessing indigenous Arctic communities' use of and reliance on HFO. PAME I-2018 approved the draft field survey, and AIA took the lead on the logistics of survey implementation, with support from the United States and the Circumpolar Conservation Union (CCU). After discussions with other Permanent Participants, AIA added an open-ended question to the survey and drafted a letter describing the project and procedures to accompany the survey. Prior to distribution, project co-leads added more information about the definition of HFO (see Appendix A). Finally, AIA translated the survey into Russian, Norwegian, and five dialects of Inuktitut before beginning to distribute the survey in the summer of 2018. Respondents were offered compensation for completing the survey, paid through AIA pursuant to funding provided by CCU.

Discussion

Survey Distribution

AIA distributed the survey in fillable PDF format through listservs managed by some Permanent Participants and the Arctic Council Indigenous Peoples' Secretariat (IPS). IPS provided the largest listserv. In the summer of 2018, AIA also generated a Survey Monkey tool and again shared the survey through listserv networks and on social media, hoping to get more responses. There were 19 clicks of the survey, but three skipped the whole survey, and two did not live in the correct area. In total, AIA received 14 responses, including several from AIA's networks in Russia. This section will briefly summarize the survey results. The graphic display of these results can be found in Appendix B.

Location

The survey targeted Indigenous peoples in the Arctic. Respondents from at least three countries answered the survey: there were five responses from the Russian Federation, four from Alaska in the United States, and one response from Canada. Four survey respondents did not identify their country of residence.

Survey Results

Topic 1: Electricity Generation

Thirteen respondents answered this question. This was a closed question and respondents were able to select one answer from the following options: “Diesel,” “Diesel & Wind,” “Diesel & Hydro,” “Diesel & Liquefied Natural Gas,” “Fuel & Wind,” “Hydroelectric,” “Combined Heat & Power (CHP),” “Other,” and “No Answer.” Four selected “Diesel”; two selected “Diesel & Wind”; and two selected “Other.” All of the remaining categories (Diesel & Hydro, Diesel & Liquefied natural gas, Fuel & Wind, Hydroelectric, Combined Heat & Power (CHP), No Answer) received one selection each.

Topic 2: Fuel

Eleven respondents reported that the fuel used to generate electricity in their community was “diesel.” One reported “propane” and another chose “other” (diesel and liquefied natural gas).

Topic 3: Importing Community Supplies

Arctic communities are often remote. This question asked how the community was supplied with food, goods, or other things that were not hunted, caught, grown, or made locally. Nine respondents indicated that goods were brought in by “boat” or “ship.” Five said things were brought in by “airplane.” Three respondents said “car,” and three said “truck,” the difference being personal vehicles versus large semi-trailer trucks. Two said “other” and eight respondents said that the method of getting supplies changed based on the season. Respondents were able to make more than one choice, 13 respondents answered this question and six respondents skipped it.

Respondents were also able to describe how supplies came into their communities, providing the following information:

- 1) Air six days a week, boat weekly, and barge.
- 2) The vessel supplies food to town
- 3) Marine transport
- 4) Freight boat
- 5) All Northwest Territories Gwich’in communities have all season winter road, other than Aklavik, which has a seasonal ice road.
- 6) Fuel run ships
- 7) By plane daily, barges come springtime until October
- 8) Freight boat weekly, barge varies, fishing vessels seasonal, airplane - daily, ferry - seasonal.
- 9) Car truck to the local store daily.

Topic 4: Exporting goods and waste

Question 9 addressed how communities sent away food, goods, minerals, timber, trash, or other things that were not hunted, caught, grown, made, or harvested locally. Respondents were able to choose multiple answers. Seven respondents mentioned that the answers to this varied by season. Eight respondents said their communities sent away these items by “boat”

or “ship.” Six said “airplane,” four said “other,” and “car” and “truck” were both chosen by two respondents each.

The final question gave respondents an opportunity to share other information about how HFO may have been used in their communities. One respondent added a comment that said, “marine traffic, tankers ship crude oil” without any further elaboration. There was no additional information received to this final question.

Conclusions

None of the survey responses indicated any reliance on HFO for on-shore heat or energy generation. None of the survey responses specified that HFO was the fuel used by the transportation modes for bringing in community supplies or sending off community-produced goods, products, or wastes burned HFO.

Although the number of responses received was too few to be statistically significant, they are generally consistent with the information contained in the HFO literature survey submitted by the USA to PAME II-2019 (PAME(II)/19/6.2/a).

Next Steps

The project co-leads suggest that PAME members submit, as soon as practicable, any additional information they may have on the reliance by indigenous and local Arctic communities on HFO, particularly any evidence that any Arctic communities do in fact rely on HFO. Improving the accuracy of information regarding reliance on HFO would help to ensure that future decisions regarding a potential phase-out of HFO use by ships in the Arctic are made with full awareness of possible socio-economic impacts.

Recommendations

The projects co-leads recommend that PAME II-2019 adopt a RoD that:

- welcomes the final survey report prepared by AIA;
- invites PAME members to submit as soon as practicable and no later than PAME I-2020 any additional information they may have on the reliance by indigenous and local Arctic communities on HFO, particularly any evidence that any Arctic communities do in fact rely on HFO and if so in what manner; and
- instructs the project co-leads to continue to coordinate with SDWG on this joint project as necessary and appropriate.

APPENDIX A- Copies of the survey instrument in all languages.

**Indigenous Use of Heavy Fuel Oil Survey
Consent Form**

Project Contact: Liza Mack, Aleut International Association, liza.mack@aleut-international.org

You are invited to participate in a study entitled “Assessing the Use of Heavy Fuel Oil (HFO) in Indigenous Communities,” in collaboration with the Protection of the Arctic Marine Environment (PAME) and Sustainable Development Working Group (SDWG) of the Arctic Council.

What the study is about:

- This study is collecting, reporting, and or reviewing information about on-shore use by Indigenous peoples and communities that rely on ships that burn HFO to deliver supplies and provisions.
- Contributing to building an integrated knowledge-base by establishing the importance of HFO to Indigenous Arctic communities, which will help inform future decisions regarding HFO regulation.
- Fostering a better understanding of the human dimensions of HFO regulation the Arctic.
- Assisting with the Arctic Council PAME’s efforts at mitigating the potential effects of HFO use by ships on the Arctic marine environment by expanding the knowledge-base regarding current uses of HFO.
- Helping achieve UN Sustainable Development Goal 14 (conserving and sustainably using the oceans, seas, and marine resources). This project will contribute to Goal 14 by analyzing reliance on HFO – a fuel that is near impossible to clean up in the marine environment if spilled – in order to inform efforts to curb or eliminate HFO use.

What you will be asked to do: Please read the definition of Heavy Fuel Oils on page 5 and then complete a short interview. The interview consists of twelve questions and will take about 20 minutes.

Risks and benefits: There are no anticipated risks to you if you participate in this study, beyond those encountered in everyday life. A benefit of participating in this study is affecting decision making. The information you provide will be combined with other responses from around the Arctic and a report will be made available. Your responses may affect policy seeking sustainable use of marine resources. Your responses will help bring the perspectives of Arctic Indigenous people and communities and their use or reliance on HFO to decision-makers. You will also be offered **\$50 USD** as a stipend for providing your knowledge and expertise.

Your answers will be confidential: Your responses in this study will be anonymous. Only project personnel will have access to the individual records. Any report of this research that is made available to the public will not include your name or any other individual information by which you could be identified.

Taking part is voluntary: Taking part in this study is completely voluntary. If you choose to be in the study you can stop at any time without consequences of any kind. Participating in this study does not mean that you are giving up any of your legal rights.

If you have questions or want a copy or summary of the study results: Contact Jessica Veldstra, at jessica.veldstra@aleut-international.org, 907-332-5388 ext. 2. If you would like we can provide you a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions. I consent to take part in the research study “Assessing the Use of Heavy Fuel Oil (HFO) in Indigenous Communities.”

_____	_____
Printed Name	Email Address for PayPal Payment
_____	_____
Participant’s Signature	Date

The information provided on this page will remain confidential. It will only be used to issue participation payment or clarify responses if needed.

Please submit completed questionnaire to jessica.veldstra@aleut-international.org by **May 31, 2018**

On-shore use

1) How does your community generate electricity?

2) If a fuel is burned to generate electricity, do you know what kind of fuel (e.g., propane, gasoline, diesel, oil)?

3) If fuel oil is burned, do you know what kind of oil? Please describe it.

4) Is fuel oil used in your community for any other purpose? Yes No

If so, please explain.

5) If your answer to question #4 is yes; do you know what kind of fuel oil? Please describe it.

6) If fuel oil is used in your community for any purpose, do you know which company sells that oil?

Transport use

7) How is your community supplied with food, goods, or other things that aren't hunted, caught, grown, or made locally (e.g., do they come by car, truck, railroad, airplane or boat/ship)? If the answer varies by season, please indicate what time of year each supply method is used.

8) How does your community send away or transport elsewhere food, goods, minerals, timber, trash, or other things that are hunted, caught, grown, made, or harvested locally (e.g., by car, truck, railroad, airplane or boat/ship)? If the answer varies by season, please indicate what time of year each transport method is used.

9) If boats or ships are involved, do you know what kind of fuel their engines burn?

10) If yes, what type of fuel is it? Gasoline, diesel or oil?

11) If oil, do you know what kind? Please describe it.

12) If oil, do you know which company sells that oil?

Heavy Fuel Oil – What is it?

Heavy fuel oil (HFO) is the remainder of the crude oil after gasoline and distillate fuel oils, such as petrol/gasoline, diesel fuels, heating oil, kerosene, and paraffin, among others that have been extracted through the refining process. HFO's are black in color and tar-like in texture. Typically, HFO is solid or semi-solid at room temperature and needs to be heated in the fuel tank or storage tank to pour or be pumped as a liquid fuel. By comparison, distillate fuel oils are generally lighter in color than HFOs and are not a solid at room temperature. Heavy fuel oils, or residual fuels, go by many different names but are often referred to as "residual fuel oil," "Number 6 fuel," or "Bunker C fuel." Distillate fuels (petrol/gasoline, diesel fuels, heating oil, kerosene, paraffin, etc.) also go by many different names, and are often referred to as "Number 2 fuel."

Undersøkelse om urfolks bruk av tung fyringsolje Samtykkeskjema

Prosjektkontakt: Liza Mack, Aleut International Association, liza.mack@aleut-international.org

Du er invitert til å delta i en studie med tittelen "Vurdering av bruken av tung fyringsolje (HFO) i urfolksgrupper", i samarbeid med Beskyttelse av det arktiske havmiljøet (PAME) og Arbeidsgruppen for bærekraftig utvikling (SDWG) under Arktisk Råd.

Hva studien går ut på:

- Denne studien handler om å samle inn og rapportere og/eller vurdere informasjon om bruk på land av urfolk og samfunn som er avhengig av båter som forbruker tung fyringsolje for levering av forsyninger og mat.
- Bidra til å skape en integrert kunnskapsbase ved å fastslå den tunge fyringsoljens betydning for urfolks arktiske samfunn, som vil bidra til å gi grunnlag for fremtidige beslutninger om regulering av den tunge fyringsoljen.
- Fremme en bedre forståelse av de menneskelige dimensjonene av reguleringen av tung fyringsolje i Arktis.
- Bistå med Arktisk råd PAMEs innsats for å dempe de potensielle effektene av bruk av tung fyringsolje på skip i det arktiske havmiljøet ved å utvide kunnskapsbasen om dagens bruk av tung fyringsolje.
- Å bidra til å nå FNs bærekraftige utviklingsmål 14 (Bevare og bruke hav og marine ressurser på en måte som fremmer bærekraftig utvikling). Dette prosjektet skal bidra til mål 14 ved å analysere avhengigheten av tung fyringsolje - et brensel som er nesten umulig å rydde opp i havmiljøet hvis det spres - for å gi grunnlag for å dempe eller eliminere bruken av denne tunge fyringsoljen.

Hva du vil bli bedt om å gjøre: Vennligst les definisjonen av tunge fyringsoljer på side 5 og fullfør deretter et kort intervju. Intervjuet består av tolv spørsmål og vil ta omtrent 20 minutter.

Risiko og fordeler: Det innebærer ingen forventet risiko for deg å delta i denne studien, utover de som allerede finnes i hverdagslivet. En fordel ved å delta i denne studien er påvirkningen av beslutningene som fattes. Informasjonen som du gir vil bli kombinert med andre svar fra hele Arktis, og en rapport vil bli gjort tilgjengelig. Svarene dine kan påvirke politikken som søker en bærekraftig bruk av marine ressurser. Svarene dine vil bidra til å bringe perspektivene til de arktiske urfolkene og samfunnene og deres bruk eller avhengighet av tung fyringsolje til beslutningstakere. Du vil også bli tilbudt **\$50 USD** som et stipend for at du bistår med kunnskapen og ekspertisen din.

Svarene dine vil være konfidensielle: Svarene dine i denne studien vil være anonyme. Kun personell som jobber med prosjektet vil ha tilgang til de enkelte registrene. Enhver rapport som offentliggjøres vil ikke inneholde navnet ditt eller enhver type informasjon som gjør at du kan identifiseres.

Deltakelsen er frivillig: Deltakelsen i denne studien er helt frivillig. Dersom du velger å delta i studien kan du stoppe når som helst uten at det får noen som helst konsekvenser for deg. Å delta i denne studien betyr ikke at du overgir noen av de juridiske rettighetene dine.

Dersom du har spørsmål eller ønsker en kopi eller et sammendrag av studieresultatene:

Kontakt Jessica Veldstra, at jessica.veldstra@aleut-international.org, 907-332-5388 linje 2. Hvis du vil kan vi gi deg en kopi av dette skjemaet for å beholde det for din egen del.

Samtykkeerklæring: Jeg har lest informasjonen ovenfor og har mottatt svar på eventuelle spørsmål. Jeg samtykker i å delta i forskningsstudien "Vurdering av bruken av tung fyringsolje (HFO) i urfolksgrupper".

Navn med trykkbokstaver

E-postadresse for betaling over PayPal

Deltakerens underskift

Dato

All informasjon som gis på denne siden vil forbli konfidensiell. Det vil bare bli brukt til å sørge for godtgjørelse for deltakelsen eller avklare svar hvis dette er nødvendig.

Vennligst send det ferdig utfylte spørreskjemaet til jessica.veldstra@aleut-international.org innen **31. juli 2018**

Bruk på land

1) Hvordan produserer samfunnet ditt elektrisitet?

2) Dersom et brennstoff brennes for å produsere elektrisitet, vet du hvilken type brensel (f. eks., propan, bensin, diesel, olje)?

3) Dersom fyringsolje brennes, vet du hva slags olje dette er? Beskriv den.

4) Brukes fyringsolje til noe annet formål i samfunnet der du bor? Ja Nei

Hvis ja, vennligst forklar.

5) Hvis svaret på spørsmål nr. 4 er ja; vet du hvilken type fyringsolje? Beskriv den.

6) Dersom fyringsolje brukes i samfunnet der du bor til hvilket som helst formål, vet du hvilket selskap som selger den oljen?

Transportbruk

7) Hvordan leveres mat, varer eller andre ting som ikke er jaktet, fanget, som vokser lokalt eller er laget lokalt i samfunnet der du bor (f. eks. kommer de med bil, lastebil, jernbane, fly eller med båt/skip)? Hvis svarene dine varierer med årstidene, vennligst angi på hvilken årstid de enkelte metodene brukes.

8) Hvordan transporterer samfunnet der du bor bort mat, varer, mineraler, tømmer, søppel eller andre ting som er jaktet, fanget, vokst, laget eller høstet lokalt (f. eks. med bil, lastebil, jernbane, fly eller båt/skip)? Hvis svarene dine varierer med årstidene, vennligst angi på hvilken årstid de enkelte metodene brukes.

9) Hvis båter eller skip benyttes, vet du hvilken type brennstoff motorene deres bruker?

10) Hvis ja, hvilken type brennstoff er det? Bensin, diesel eller olje?

11) Dersom det er olje, vet du hvilken type det er? Beskriv den.

12) Dersom det er olje, vet du hvilket selskap som selger den oljen?

Tung fyringsolje – Hva er det?

Tung fyringsolje (HFO) er restene av råoljen etter bensin og destillatbrennoljer, som petroleum / bensin, dieslbrensel, oppvarmingsolje, kerosene og parafin, blant annet som har blitt ekstrahert gjennom raffineringsprosessen. Tung fyringsolje er sort i fargen og tjærelignende i teksten. Vanligvis er tung fyringsolje fast eller halvfast ved romtemperatur og må varmes opp i brennstofftanken eller lagringstanken til den kan tømmes eller bli pumpet som flytende brennstoff. Til sammenligning er destillatbrennolje generelt lysere i fargen enn tunge fyringsoljer og er ikke et fast stoff ved romtemperatur. Tunge fyringsoljer, eller restbrensel, går under mange forskjellige navn, men kalles ofte "restbrenselolje," "Fyringsolje nr. 6," or "Bunker C fyringsolje." Destillatbrennoljer (petroleum / bensin, dieslbrensel, oppvarmingsolje, kerosene og parafin o.l.) har også mange navn, men kalles ofte for "Nummer 2 olje".

Эксплуатация мазута в общинах коренных народов

Форма согласия

Руководитель проекта: Лайза Мак, Алеутская Международная Ассоциация, liza.mack@aleut-international.org

Мы приглашаем Вас принять участие в исследовании по «Оценке использования мазута в общинах коренных народов» в сотрудничестве с рабочими группами Арктического совета по Защите Арктической морской среды (РАМЕ) и по Устойчивому развитию (SDWG).

Исследование заключается в следующем:

- Сбор, исследование и распространение информации об использовании в прибрежной зоне мазута судами, поставляющими материалы и снабжение для коренного населения.
- Содействие созданию интегрированной базы знаний путем определения важности использования мазута для общин коренных народов Арктики, что будет способствовать принятию информационно-обоснованных будущих решений в отношении регулирования использования мазута.
- Содействие лучшему пониманию аспектов человеческого измерения при установлении требований в отношении мазута в Арктике.
- Содействие усилиям РАМЕ по смягчению потенциальных последствий от использования мазута судами в морской среде Арктики путем расширения базы знаний о текущем использовании мазута.
- Содействие достижению цели №14 в области устойчивого развития ООН (сохранение и устойчивое использование океанов, морей и морских ресурсов). Этот проект будет способствовать достижению цели № 14 посредством анализа зависимости от мазутного топлива, которое практически невозможно очистить в морской среде в случае его разлива, с тем, чтобы информировать об усилиях по ограничению или прекращению его использования.

Что Вам предлагается сделать: Пожалуйста ознакомьтесь с определением мазута на странице 5, а затем ответьте на вопросы анкеты. Она состоит из 12 вопросов и заполнение ее займёт около 20 минут.

Риски и преимущества: Если Вы участвуете в исследовании, то в данном процессе не предвидится никаких рисков, кроме тех, которые присутствуют в повседневной жизни. Полезность участия в опросе состоит в вашем участии в процессе принятия решений. Предоставляемая Вами информация будет совмещена с другой, полученной в результате опросов в других регионах Арктики, после чего будет представлен доклад. Ваши ответы в опроснике могут повлиять на обеспечение политики устойчивого использования морских ресурсов. Они также помогут выявить позиции арктических коренных народов и общин в отношении использования или зависимости от мазута, которые могут повлиять на процесс принятия решений. Вам также будет предложено **50 долларов США** в качестве вознаграждения за предоставленные знания и экспертизу, если вы один из первых 100 респондентов.

Ваши ответы останутся конфиденциальными: Ваши ответы для данного исследования будут анонимны. Только сотрудники проекта будут иметь доступ к индивидуальным записям. Ваше имя или другая персональная информация, раскрывающая Вашу личность не будут фигурировать в публичных отчетах по этому исследованию.

Участие в исследовании по желанию. Участие в исследовании полностью зависит от Вашего желания. Если Вы пожелаете прекратить Ваше участие, то Вы можете это сделать в любое время не опасаясь никаких последствий. Участвуя в исследовании Вы не отказываетесь ни от каких-либо юридических прав.

Если у вас есть вопросы или вы хотите получить копию или краткое содержание результатов этого исследования: свяжитесь с Джессикой Велдстра по электронной почте: jessica.veldstra@aleut-international.org, или позвоните по тел.+1 907-332-5388 добавочный 2. Если Вы хотите, то мы можем предоставить Вам копию этого документа.

Заявление о согласии: Я прочитал/прочитала выше указанную информацию и получил/получила ответы на все вопросы. Я согласен/согласна участвовать в исследовании «Оценка использования мазута в общинах коренных народов».

ФИО печатными буквами

Электронный адрес для оплаты по PayPal

Подпись участника

Дата

Информация, представленная в этом документе останется конфиденциальной. Она только будет использована для перечисления оплаты или для уточнения ответов, в случае необходимости.

Пожалуйста отправьте заполненные анкеты по адресу jessica.veldstra@aleut-international.org до **31 июль 2018 г.**

Эксплуатация на берегу

1) Как в вашем поселке производится электричество?

2) Если для производства электричества приходится сжигать топливо, то знаете ли Вы какое именно топливо (пропан, бензин, дизельное топливо, нефтепродукт)?

3) Если сжигается масло, знаете ли Вы какое именно масло? Опишите пожалуйста.

4) Используется ли мазут для других целей в Вашем посёлке? Да Нет

Если да, пожалуйста поясните.

5) Если Вы ответили «Да» на 4-й вопрос, знаете ли Вы какой именно мазут используется. Пожалуйста опишите.

6) Если мазут используется в Вашем поселке для различных целей, то знаете ли Вы какая компания продает этот мазут?

Использование транспорта

7) Каким образом происходит снабжение села продуктами, материалами и другими товарами, которые нельзя получить в результате охоты, рыбалки, и которые нельзя вырастить (т.е. доставляются ли они на машине, вездеходе, поезде, самолете или лодке/судне?) Если ответ зависит от сезона, просьба указать, в какое время года используется каждый способ перевозки?

8) Как ваш посёлок отправляет или транспортирует в другое место продукты питания, товары, полезные ископаемые/минералы, древесину, мусор или другие продукты/вещи, произведенные в результате охоты, рыбалки, выращенные, произведенные или собранные на месте (например: на машине, грузовике, железной дороге, самолете или лодке/судне)? Если ответ зависит от сезона, просьба указать, в какое время года используется каждый способ перевозки?

9) Если перевозка осуществляется на судне, то на каком топливе работает мотор судна?

10) Если да, то какой вид топлива используется? Бензин, дизель или масло?

11) Если это масло, то какое именно? Пожалуйста опишите.

12) Если это масло, знаете ли Вы какая компания продает это масло?

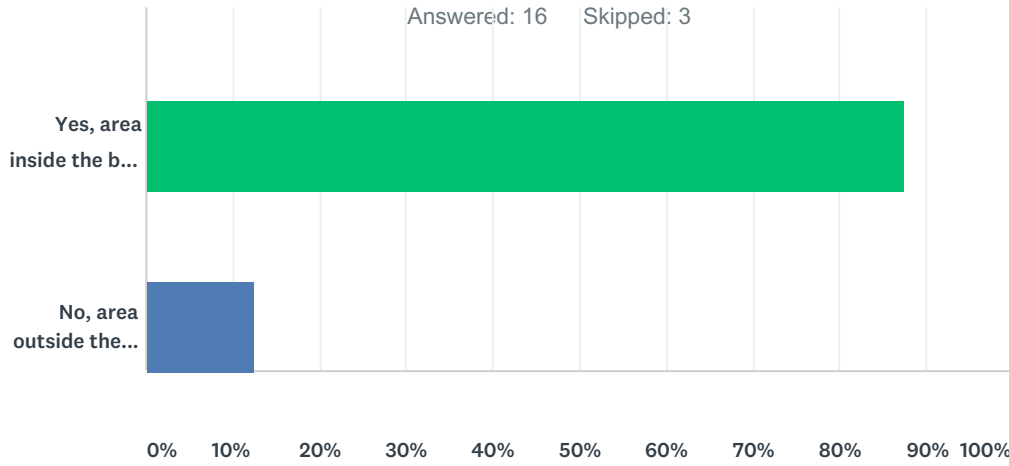
Что такое мазут?

Мазут - это остаточный продукт после выделения из нефти или продуктов ее вторичной переработки бензиновых, керосиновых, газойлевых фракций, дизельного топлива, топочного мазута, парафина, и других различных продуктов, которые можно получить в процессе переработки. Мазут имеет черный цвет, и по консистенции напоминает гудрон. Обычно мазут бывает полутвердой консистенции при комнатной температуре, и нуждается в нагревании в топливном баке или баке для хранения, для того, чтобы перелить его или накачать в жидком состоянии. Для сравнения, обычно дистиллятное топливо имеет светлый оттенок по сравнению с мазутом, и не затвердевает при комнатной температуре. Тяжёлое жидкое топливо или мазут называют по-разному, хотя общепринятые названия — это «топочный мазут», «тяжелая фракция масла №6» или «бункерное масло марки С». Дистиллятные топливо/масла (моторное топливо/бензин, дизель/солярка, топочные масла, керосин, парафин и т.д.) также могут называться по-разному, но общепринятое название для Запада— это «топливное масло №2».

Примечание: В российской практике «мазут» является зонтичным термином, который, как правило, является синонимом мазута в целом, который охватывает большинство упомянутых выше типов, кроме использующихся в США №1 и 2/3, для которых существуют отдельные термины (керосин и дизельное топливо).

APPENDIX B- Survey Results

Q1 Do you or have you lived or worked in an Arctic community?



ANSWER CHOICES	RESPONSES
Yes, area inside the blue line.	87.50% 14
No, area outside the blue line.	12.50% 2
TOTAL	16

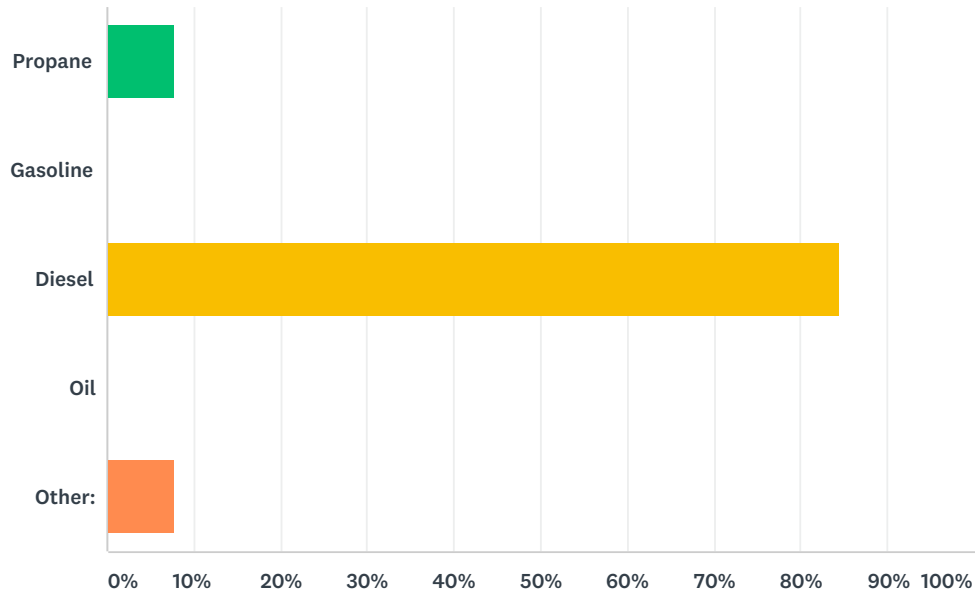
Q2 How does your community generate electricity?

Answered: 13 Skipped: 6

#	RESPONSES	DATE
1	TDX power generating plant.	1/22/2019 4:32 PM
2	Hydroelectric	8/30/2018 4:39 PM
3	There is a Diesel Power Plant in our town that generates electricity.	8/30/2018 3:14 PM
4	There is a Diesel Power Plant in our town that generates electricity.	8/30/2018 3:09 PM
5	There is a Diesel Power Plant in our town that generates electricity.	8/30/2018 3:00 PM
6	From diesel power plant	8/28/2018 7:36 PM
7	Fuel and wind generated	8/28/2018 7:23 PM
8	Inuvik - diesel generation and liquefied natural gas (minimal solar) Aklavik - Diesel generation Fort McPherson - diesel generation Tssigechic - Diesel generation	8/28/2018 6:54 PM
9	Wind generators mills and diesel engine generators.	8/28/2018 3:30 PM
10	Generator by A.V.E.C.	8/28/2018 3:24 PM
11	The main source of electricity is generated by Sand Point Generating operating a diesel plant that includes four caterpillar diesel engines with capacities between 400 kw and 900kw for a total generating capacity of 2.6 mw. Also 2 500w wind turbines went on line few years ago. With the wind turbines 85% of Sand Point electrics production comes from diesel generation. Trident Seafoods generates electricity also. A very small percentage of homes operate small portable generators when needed.	8/23/2018 11:27 AM
12	Təu	8/10/2018 8:12 AM
13	Diesel and Hydro	8/2/2018 11:26 AM

Q3 If a fuel is burned to generate electricity, do you know what kind of fuel?

Answered: 13 Skipped: 6

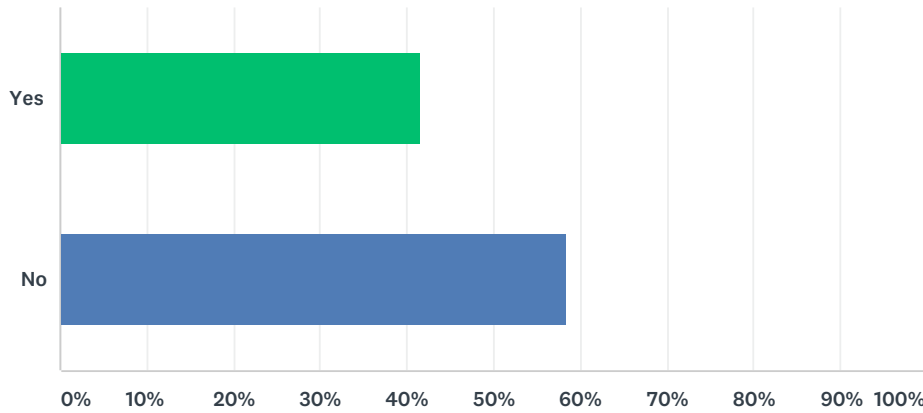


ANSWER CHOICES	RESPONSES
Propane	7.69% 1
Gasoline	0.00% 0
Diesel	84.62% 11
Oil	0.00% 0
Other:	7.69% 1
TOTAL	13

#	PLEASE DESCRIBE OTHER:	DATE
1	#2 Diesel	1/22/2019 4:32 PM
2	The Power Plant is powered by Diesel.	8/30/2018 3:14 PM
3	The Power Plant is powered by Diesel.	8/30/2018 3:09 PM
4	The Power Plant is powered by Diesel.	8/30/2018 3:00 PM
5	I believe it's diesel	8/28/2018 7:23 PM
6	Please see answer to question 1	8/28/2018 6:54 PM
7	Diesel engines burn diesel.	8/28/2018 3:30 PM
8	A large percentage of electricity is generated from petroleum liquids using diesel.	8/23/2018 11:27 AM

Q4 If fuel oil is burned, do you know what kind of oil? Please describe it.

Answered: 12 Skipped: 7

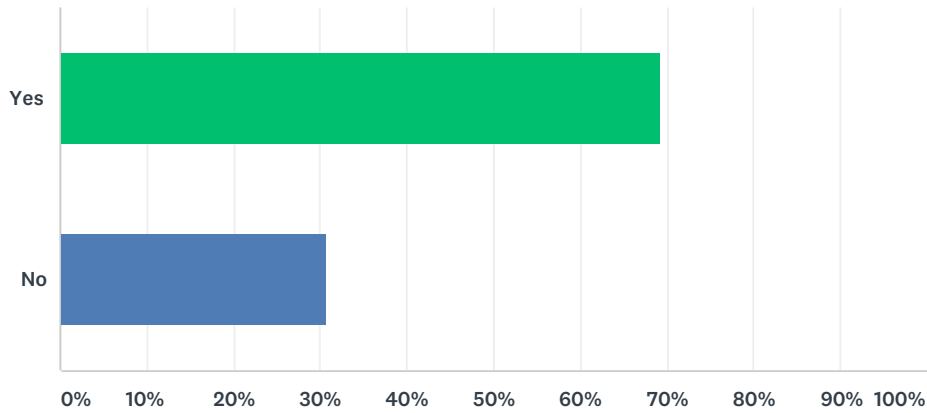


ANSWER CHOICES	RESPONSES	
Yes	41.67%	5
No	58.33%	7
TOTAL		12

#	PLEASE DESCRIBE IT:	DATE
1	#2 Diesel	1/22/2019 4:32 PM
2	Diesel oil to lubricate diesel engine.	8/30/2018 3:14 PM
3	Diesel oil to lubricate diesel engine.	8/30/2018 3:09 PM
4	Diesel oil to lubricate diesel engine.	8/30/2018 3:00 PM
5	My only knowledge is that its diesel	8/28/2018 7:23 PM
6	Diesel fuel and liquefied natural gas	8/28/2018 6:54 PM
7	liquid oil	8/28/2018 3:30 PM
8	Stove oil	8/28/2018 3:24 PM
9	# 2 diesel, heating oil, stove oil, a small tiny percent -waste oil. Ultra low sulfur diesel. Gas in small portable generators.	8/23/2018 11:27 AM
10	Diesel	8/2/2018 11:26 AM

Q5 Is fuel oil used in your community for any other purpose?

Answered: 13 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	69.23%	9
No	30.77%	4
TOTAL		13

#	IF SO, PLEASE EXPLAIN.	DATE
1	Boats, heating furnaces, airplanes, trucks, cars, motorbikes	1/22/2019 4:32 PM
2	Heat homes, run cars/boats/planes, propane for barbeques and heaters	8/28/2018 7:23 PM
3	Residential and commercial heat	8/28/2018 6:54 PM
4	Garbage dump burns used oil and city shop burns used oil	8/28/2018 3:30 PM
5	Heavy equipment	8/28/2018 3:24 PM
6	Yes the city has a waste oil drop off center in the boat harbor. The waste oil is burned at the city shop and a couple other places in the community.	8/23/2018 11:27 AM
7	Котельные отапливают дома горячей водой	8/10/2018 8:12 AM
8	Cars and Boats	8/2/2018 11:26 AM

Q6 If your answer to question #5 is yes; do you know what kind of fuel oil? Please describe it.

Answered: 9 Skipped: 10

#	RESPONSES	DATE
1	AV-Gas, diesel, gas, kerosene	1/22/2019 4:32 PM
2	Diesel	8/30/2018 4:39 PM
3	Stove oil 1 & 2, gasoline, propane, diesel.	8/28/2018 7:23 PM
4	I don't know what grade of heating fuel??	8/28/2018 6:54 PM
5	All used oils.	8/28/2018 3:30 PM
6	Stove oil	8/28/2018 3:24 PM
7	all byproducts of waste oil.	8/23/2018 11:27 AM
8	Топочный, реже флотский	8/10/2018 8:12 AM
9	Diesel	8/2/2018 11:26 AM

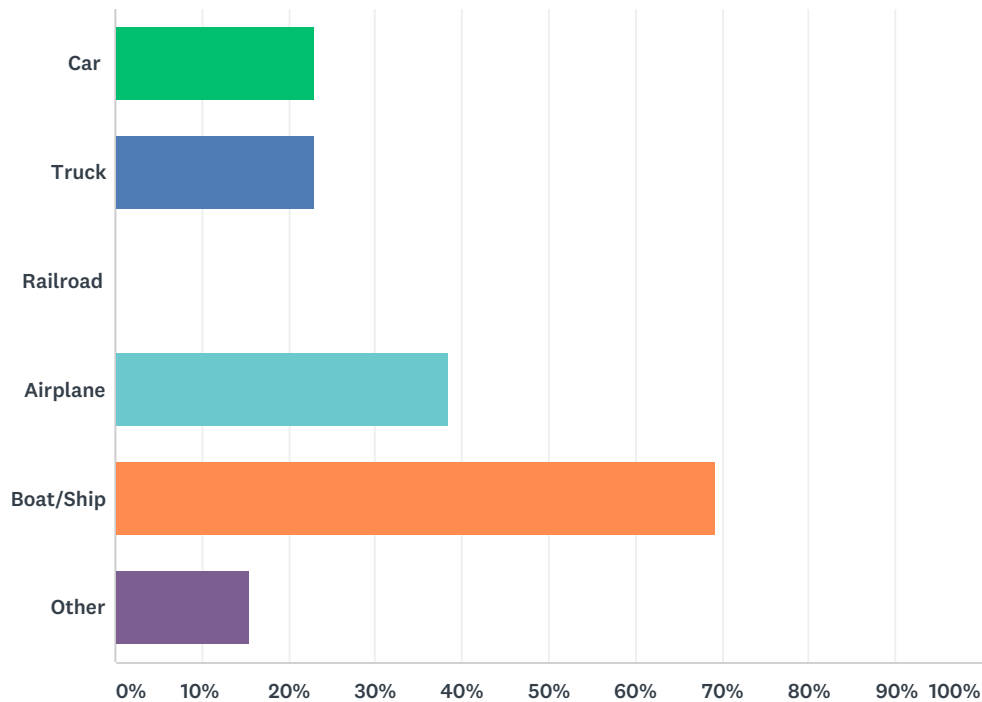
Q7 If fuel oil is used in your community for any purpose, do you know which company sells that oil?

Answered: 10 Skipped: 9

#	RESPONSES	DATE
1	TDX sells bulk fuel and buys from Trident Seafoods. (diesel) Trident Seafoods has a holding facility for bulk fuel and sells to residents, vessels, TDK & businesses.	1/22/2019 4:32 PM
2	No	8/30/2018 4:39 PM
3	Our town does not used HFO.	8/30/2018 3:00 PM
4	Trident Seafoods is the primary distributor, other companies re-sell it (Sand Point Air, Freight and Fuel as well as Sand Point Services.	8/28/2018 7:23 PM
5	Imperial oil provided oil for residential and commercial heating oil at a subsidized rate to home owners and I believe Imperial oil also provides oil for the regional utility. The liquefied natural gas is on an open tender basis and supplier change.	8/28/2018 6:54 PM
6	Trident Seafoods	8/28/2018 3:30 PM
7	G.N.S.	8/28/2018 3:24 PM
8	Trident Seafoods has a bulk fuel farm and is the main supplier of fuel in the community. Sanad Point Air Fuel and Freight also sells fuel to businesses, homes and aircraft. Sand Point Electric sells home heating fuel to businesses and homes.	8/23/2018 11:27 AM
9	Her	8/10/2018 8:12 AM
10	Peter Pan Seafoods, King Cove Corporation	8/2/2018 11:26 AM

Q8 How is your community supplied with food, goods, or other things that are not hunted, caught, grown, or made locally?

Answered: 13 Skipped: 6



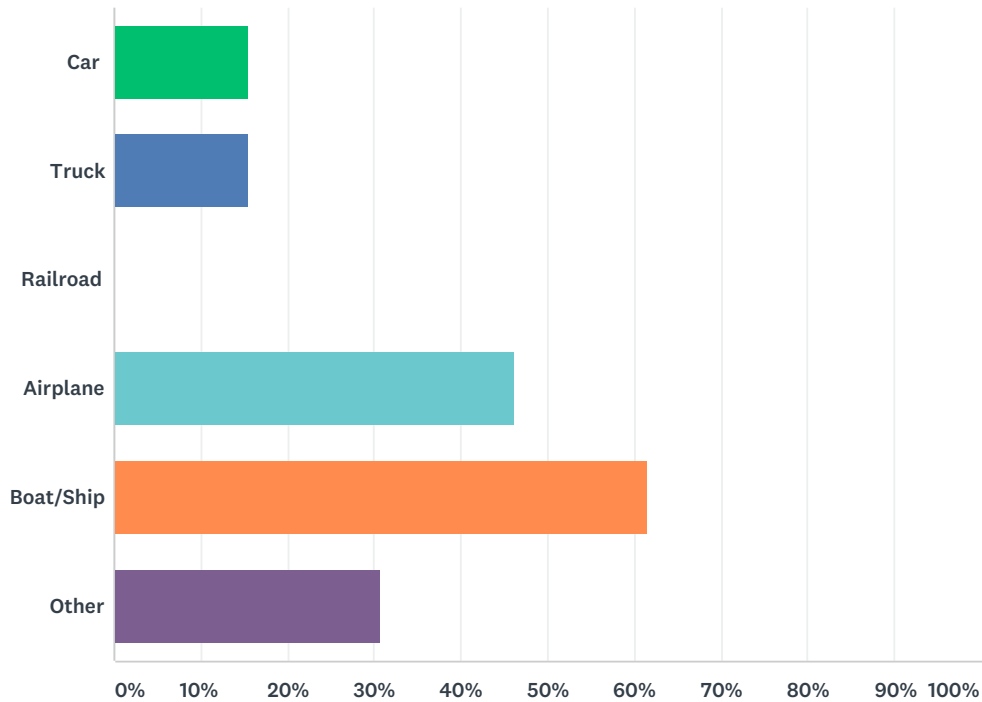
ANSWER CHOICES	RESPONSES	
Car	23.08%	3
Truck	23.08%	3
Railroad	0.00%	0
Airplane	38.46%	5
Boat/Ship	69.23%	9
Other	15.38%	2
Total Respondents: 13		

#	IF THE ANSWER VARIES BY SEASON, PLEASE INDICATE WHAT TIME OF YEAR EACH SUPPLY METHOD IS USED AND PLEASE DESCRIBE OTHER.	DATE
1	Air 6 days a week, boat weekly, and barge.	1/22/2019 4:33 PM
2	The vessel supplies food to town.	8/30/2018 3:11 PM
3	Marine transport	8/28/2018 7:37 PM
4	freight boat	8/28/2018 7:24 PM
5	All Northwest Territories Gwich'in communities have all season winter road, other than Aklavik, which has a seasonal ice road.	8/28/2018 7:13 PM
6	Fuel run ships	8/28/2018 3:32 PM
7	by plane daily, barges come spring time until October.	8/28/2018 3:25 PM

8	Freight boat weekly, barge varies, fishing vessels seasonal, airplane- daily. Ferry-seasonal. Car truck to the local store daily.	8/23/2018 11:30 AM
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Q9 How does your community send away or transport elsewhere food, goods, minerals, timber, trash, or other things that are hunted, caught, grown, made, or harvested locally.

Answered: 13 Skipped: 6

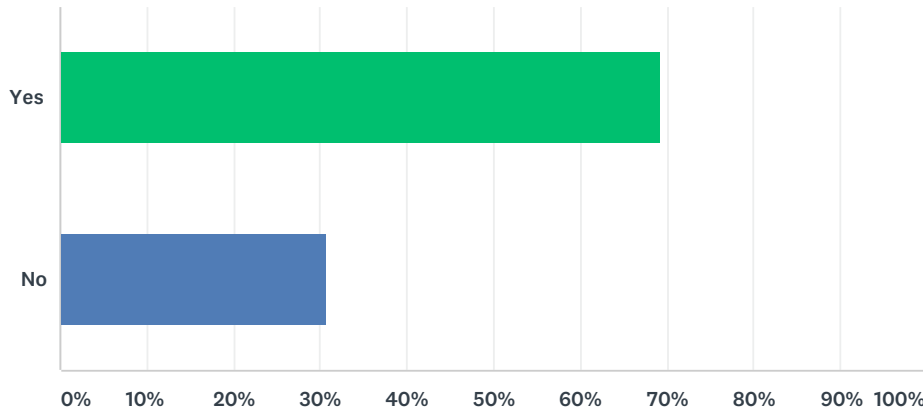


ANSWER CHOICES	RESPONSES	
Car	15.38%	2
Truck	15.38%	2
Railroad	0.00%	0
Airplane	46.15%	6
Boat/Ship	61.54%	8
Other	30.77%	4
Total Respondents: 13		

#	IF THE ANSWER VARIES BY SEASON, PLEASE INDICATE WHAT TIME OF YEAR EACH TRANSPORT METHOD IS USED AND PLEASE DESCRIBE OTHER.	DATE
1	marine transport	8/28/2018 7:37 PM
2	freight boat	8/28/2018 7:24 PM
3	There is a barge service to Aklavik in the summer months	8/28/2018 7:13 PM
4	Shipped by coastal transportation	8/28/2018 3:32 PM
5	Mostly by plane (daily flights)	8/28/2018 3:25 PM
6	Freight Boat, Barge, airplane, fishing vessel, ferry.	8/23/2018 11:30 AM
7	We don't export anything	8/2/2018 11:27 AM

Q10 If boats or ships are involved, do you know what kind of fuel their engines burn?

Answered: 13 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	69.23%	9
No	30.77%	4
TOTAL		13

Q11 If yes, what type of fuel is it?

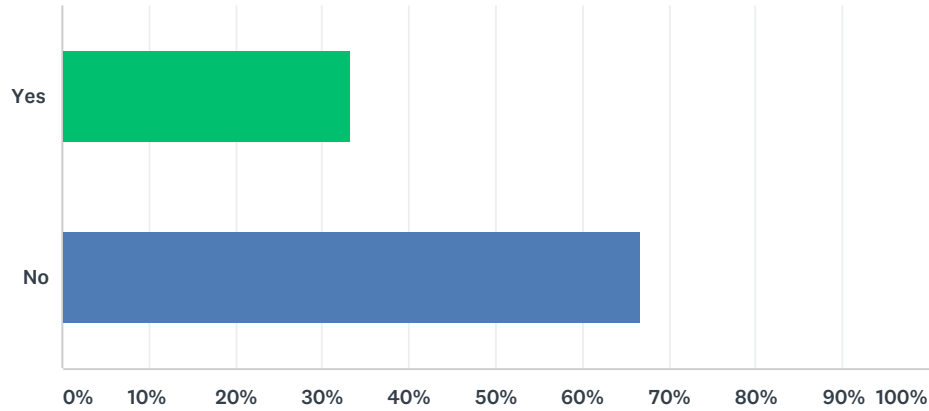
Answered: 0 Skipped: 19

 No matching responses.

ANSWER CHOICES	RESPONSES	
Gasoline	0.00%	0
Diesel	0.00%	0
Oil	0.00%	0
I do not know	0.00%	0
TOTAL		0

Q12 If oil, do you know what kind?

Answered: 9 Skipped: 10

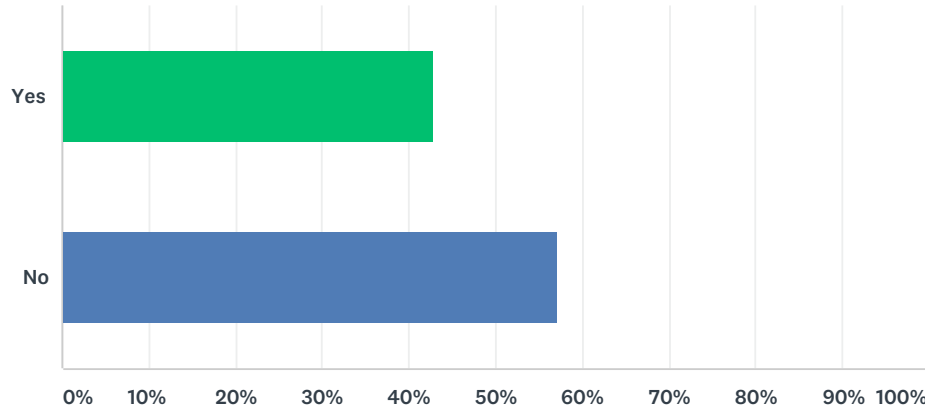


ANSWER CHOICES	RESPONSES	
Yes	33.33%	3
No	66.67%	6
TOTAL		9

#	PLEASE DESCRIBE IT.	DATE
1	Diesel fuel	8/30/2018 3:14 PM
2	Diesel.	8/30/2018 3:11 PM
3	Diesel fuel	8/30/2018 3:04 PM
4	diesel fuel	8/28/2018 7:37 PM
5	Not sure, assume diesel	8/28/2018 7:14 PM
6	Diesel	8/28/2018 3:32 PM
7	gasoline	8/28/2018 3:26 PM
8	Mainly diesel fuel in the engines they operate with oil additives added to the engine.	8/23/2018 11:32 AM

Q13 If oil, do you know which company sells that oil?

Answered: 7 Skipped: 12



ANSWER CHOICES	RESPONSES	
Yes	42.86%	3
No	57.14%	4
TOTAL		7

#	COMPANY THAT SELLS THE OIL:	DATE
1	Diesel oil for diesel engine lubrication. I don't have information about the oil's name.	8/30/2018 3:04 PM
2	Trident Seafoods	8/28/2018 3:32 PM
3	G.N.S.	8/28/2018 3:26 PM
4	Trident Seafoods locally here in Sand Point.	8/23/2018 11:32 AM

Q14 Do you have any other comments, questions, or concerns about HFOs?

Answered: 3 Skipped: 16

#	RESPONSES	DATE
1	Marine traffic, tankers ship crude oil.	8/23/2018 11:33 AM
2	Нет	8/10/2018 8:14 AM
3	no	8/2/2018 11:27 AM