

# FINAL REPORT

2023 - 2024



PRODUCED BY  
**ATLANTICA CENTRE  
FOR ENERGY**  
MAY 2024

# TABLE OF CONTENTS

Project Description	2
Partners and Collaborators	3
Problem Statement	4
Project Objectives	5
Key Performance Indicators	6
Brand Development	7
Clean Fuels Learning Pathways	9
Clean Fuels Awareness Survey	13
Fuel 4 the Future Bursaries	17
Post Secondary Engagement	18
Indigenous Engagement	20
Website & Social Media Engagement	21
Ad Campaign	23
Financials	24
Project Achievements	25

# EMPOWERING ATLANTIC CANADA'S CLEAN FUELS WORKFORCE

**Proponent:** Atlantica Centre for Energy



The mission of the Centre is to *Proactively engage with industry, government and the public to foster sustainable growth related to energy opportunities in Atlantic Canada.*

The Centre commits to its mission by **facilitating dialogue** through actively participating in conferences and events; publishing papers and commentaries; and coordinating events and discussions. By increasing **energy literacy** through providing access to accurate and reliable information on important current energy topics. And by **fostering partnerships** through connecting stakeholders and providing networking opportunities with our broad reach in Atlantic Canada across all sectors related to energy.

## Project Description

The 'Clean Fuels Awareness Project' was an opportunity to target the lack of awareness the next generation of the workforce has about the opportunities, benefits, and considerations related to adopting clean fuels in Atlantic Canada. Through collaboration with post-secondary institutions, industry partners, and First Nations, the future workforce will be innovatively exposed to career pathways within the clean fuels value chain.

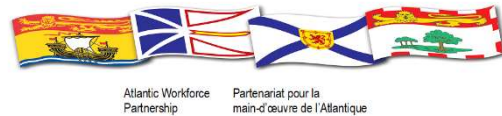
*Atlantica Centre for Energy views this project, which targets the future workforce, as incremental next steps to its energy literacy efforts.*

# PARTNERS AND COLLABORATORS

## Contributing Partners

- 🔥 Natural Resources Canada (NRCan)
- 🔥 Council of Atlantic Premiers – Atlantic Workforce Partnership
- 🔥 Saint John LNG (Repsol S.A.)
- 🔥 Emera New Brunswick
- 🔥 Liberty
- 🔥 University of New Brunswick

Canada



## Collaborators

- 🔥 **Industry:** ARC Clean Energy Canada, Marine Renewables Canada, NB Power, Wind Energy Institute of Canada (WEICan), Eastward Energy, ABO Wind, Irving Oil Ltd., Port of Halifax, Net Zero Atlantic, econext, NAYGN NB, Port of Belledune
- 🔥 **Post-Secondary Institutions:** New Brunswick Community College, Collège Communautaire du Nouveau-Brunswick, New Brunswick Indigenous Career College, Nova Scotia Community College, Unama'ki College, College of the North Atlantic, Holland College, University of New Brunswick, University of Prince Edward Island, Dalhousie University, Memorial University of Newfoundland, Cape Breton University
- 🔥 **Indigenous Consulting:** Indigenous Treaty Partners, North Shore Mi'kmaq Tribal Council
- 🔥 **Creative Consulting:** ICS Creative Agency

# WHAT IS THE PROBLEM WE WANT TO SOLVE?

1.

'Clean fuels' is a broad and unclear term.

2.

Companies who will be drivers of adopting clean fuels are not necessarily associated with the sector.

3.

Companies driving the adoption of clean fuels are growing and finding it difficult to hire younger workers.

4.

The future workforce is unaware of job opportunities related to clean fuels in Atlantic Canada.

*"I was surprised to learn that there is an actual push for bringing in cleaner fuels, seems like more of just talk sometimes."*

- Power Engineering Student,  
NBCC Saint John

*"L'énergie propre est essentielle pour notre avenir et qu'il faut s'en soucier dès maintenant."*

- CNC Machinist Student,  
CCNB Bathurst

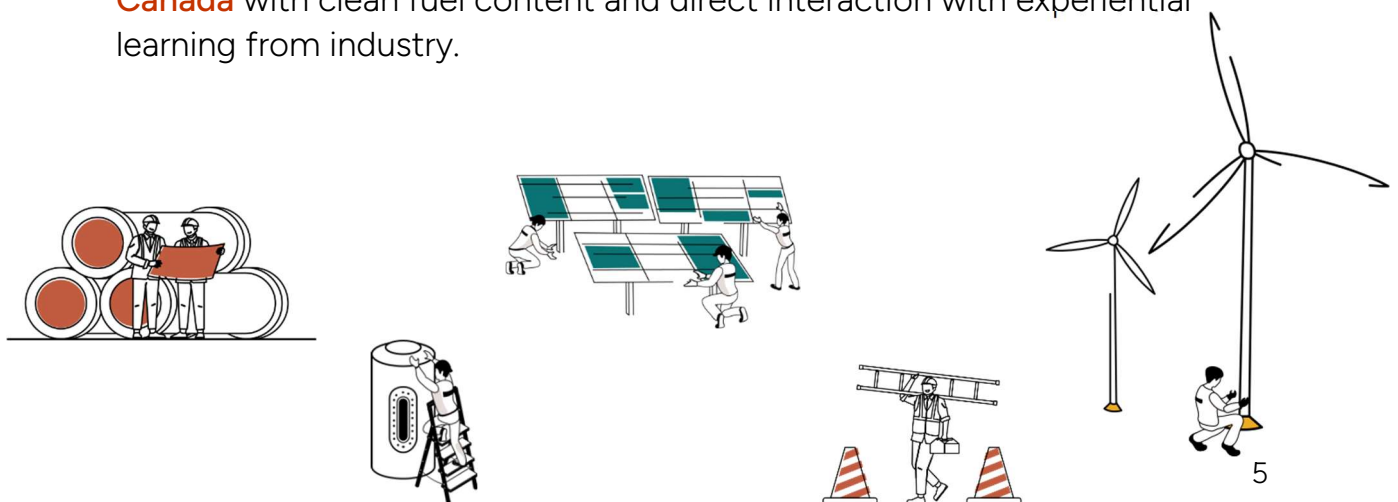
# Fuel 4 the Future | L'énergie de l'avenir

*Empowering Atlantic Canada's Clean Fuel Workforce*

- 🔥 The Fuel 4 the Future (F4F) team collaborated with post-secondary institutions, industry partners, First Nations communities, and students.
- 🔥 The team sought to expose the future workforce to career pathways within the clean fuels value chain.
- 🔥 Project tactics included:
  - the creation of an interactive learning website ([fuel4future.ca](https://fuel4future.ca)),
  - in-person and in-class activities and presentations,
  - virtual events,
  - awareness surveys,
  - job fairs, and more.

## Objectives

- 🔥 Execute at least **two** clean fuel related events in each of the Atlantic provinces by **March 2024**.
- 🔥 Expose approximately **20% of Atlantic Canadian post-secondary students in STEM programs (5100 students)** to the opportunities, benefits, and considerations related to adopting clean fuels in Atlantic Canada by the end of March 2024.
- 🔥 **Enhance** post-secondary curriculum at **six to eight institutions in Atlantic Canada** with clean fuel content and direct interaction with experiential learning from industry.

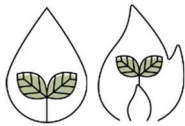


# KEY PERFORMANCE INDICATORS

To measure the success of the project, the following KPIs were identified:

Student, faculty, and industry engagement: number of new materials developed, website content analytics (visits, clicks, etc.).

Engage users through surveys.  
Target: 1000 user surveys completed.



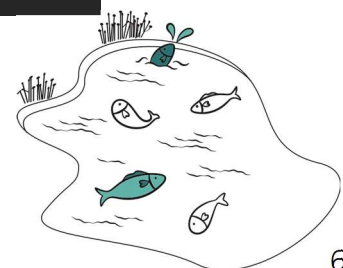
Host six to eight in-person events and six virtual events for students, educators, and industry.

Number of accessed/downloads of teaching and learning resources from website.  
Target: 50 downloads.

Engage with Indigenous partners throughout the duration of the project.  
Target: two groups engaged.

Number of Clean Fuels Pathways game participants.  
Target: 500 users.

Total participation tracked a minimum of 5100 students participating in various aspects of Fuel 4 the Future project.



# BRAND DEVELOPMENT

The Fuel 4 the Future team worked with ICS Creative Agency to develop the name, branding and website for the project.

## Name & Logo



The name *Fuel 4 the Future* represents how post-secondary students and Indigenous youth are the *fuel* of the future workforce for the energy sector in Atlantic Canada. The number 4 represents the four Atlantic provinces, the four seasons, and for directions.

The logo features an arrowhead shape that represents spearheading future efforts, pointing north to guide our way.

- **Red** = a sacred colour for Indigenous peoples
- **Yellow** = the sun, which is a significant cultural symbol for Mi'kmaki people.
- **Blue** and **green** = where the water meets the land in Atlantic Canada.





# BRAND DEVELOPMENT

## Characters

- 🔦 ICS Creative Agency developed three characters for the project. These characters—**Riya**, **Lucas**, and **Kristy**—act as the narrators for the interactive learning tool called the **Clean Fuels Learning Pathways**.
- 🔦 These characters are around the same age as the project's target audience (post-secondary students). The characters are either just beginning their schooling or entering the clean fuels workforce. The F4F team wanted to reflect the audience in the narrators so they could see themselves in this sector.
- 🔦 On the recommendation of the project's Indigenous consultants, the **Kristy** character is Indigenous. The double curve motif on her dress and her long black hair, which is depicted in a braid throughout the pathway, were suggested to give her an Indigenized look. Initially, the character was supposed to work in a landfill but to ensure cultural sensitivity, it was changed to a dairy farm.



# CLEAN FUELS LEARNING PATHWAYS

The Clean Fuels Learning Pathways were developed to teach post-secondary students and Indigenous youth the basics about the clean fuels industry in Atlantic Canada. Students can learn the basics about renewable natural gas, biofuels and clean hydrogen, how they're made, and which companies are producing them in Atlantic Canada.

The learning pathways are interactive, featuring quizzes, videos and animations. Each pathway takes approximately 15 minutes to complete, and student's knowledge is tested throughout.

All three learning pathways are available in English and French at [fuel4future.ca/learn](https://fuel4future.ca/learn).

**L'énergie de l'avenir**

Bienvenue à l'avenir.

Le secteur de l'énergie a besoin de jeunes gens comme toi qui seront bientôt diplômés et qui sont prêts à faire la différence. La première étape de ce cheminement consiste à découvrir les possibilités. Pourquoi ne pas explorer ce que l'avenir pourrait te réserver grâce aux parcours d'apprentissage sur les carburants propres de l'énergie de l'avenir? Tu découvriras les notions de base sur les carburants propres qui alimenteront notre avenir, tels que le gaz naturel renouvelable, les biocarburants et l'hydrogène propre. Tu en apprendras également sur les entreprises impliquées dans cette industrie dynamique à travers le Canada atlantique, afin que tu puisses imaginer ton avenir professionnel.

**Join the Refuelution!**

Select a clean fuel learning pathway to begin your journey! Each pathway takes an average of 15 minutes to complete. To find out what each pathway is about, click on a character for a brief introduction.

Login / Register

Riya's Renewable Natural Gas Pathway →

Lucas' Biofuels Pathway →

Kristy's Clean Hydrogen Pathway →

**Renewable diesel is in my wheelhouse, so let's start there!**

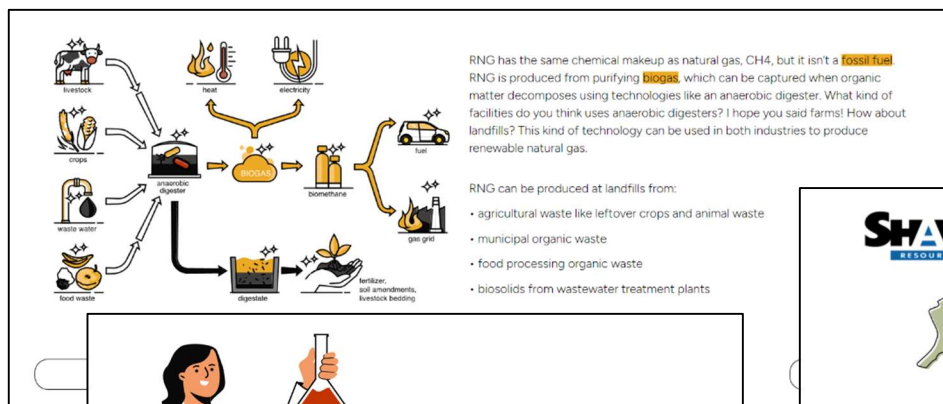
This type of biofuel can be broken down into two categories:

biodiesel and hydrogenation-derived renewable diesel

Like electricity, **hydrogen (H<sub>2</sub>)** is an energy carrier but it's in the form of a gas that doesn't emit any greenhouse gas (GHG) emissions when it's used. For hydrogen to be considered a zero-emitting clean fuel, it has to be produced using clean energy. Generating clean electricity is an important step on the path to reducing our reliance on fossil fuels, lowering our carbon footprint, and meeting our net zero goals.

The wide variety of clean energy sources that can be used to produce clean hydrogen include wind, solar, biomass, hydro, geothermal, and nuclear. These clean energy sources are (some of the many) building blocks for clean hydrogen! Let's look at a few of those sources that are available in Atlantic Canada.

# Clean Fuel Learning Pathway Snapshots



**SHAW RESOURCES**

Il y a de nombreuses écoles qui utilisent des fournitures à granulés de bois au Nouveau-Brunswick et en Nouvelle-Écosse! Shaw Resources a une exploitation à Bellefleur, au Nouveau-Brunswick, qui exporte des granulés de bois par le port de Belledune.

Clique ici pour faire une visite virtuelle de leur usine de granulés.

Commencer

**Bonjour les amis,**  
Je m'appelle Kristy.

**Je suis une étudiante universitaire de deuxième année**  
qui prépare mon baccalauréat en sciences, avec spécialisation en chimie.

J'ai grandi en regardant la crise climatique se dérouler à l'écran, alors j'ai fait de mon mieux pour en apprendre davantage sur l'énergie propre, afin de commencer à réduire mon empreinte carbone. Je veux faire partie de la solution, pour aider à créer un avenir meilleur pour mes jeunes frères et sœurs (et moi-même!).

The next generation of nuclear reactors are called advanced Small Modular Reactors (sSMR), and these reactors can be used to generate clean energy.  
(I'm betting they sound clean, too.)

**Advanced** - the next generation of nuclear reactors  
**Small** - size, energy output, and the amount of space the reactor takes up  
**Modular** - the way the sSMR components are manufactured in factories elsewhere and transported to be assembled on-site. This helps reduce costs and construction time.  
**Reactors** - they're used to generate heat to make steam for electricity or for storage, and they have the potential to create medical isotopes for healthcare treatment.

**Second Check-In**  
Answer true or false to the questions below!

1. New Brunswick and Nova Scotia are the only provinces in Atlantic Canada with natural gas pipelines. ☐ True ☐ False

2. Renewable natural gas can't be transported in the same pipelines as natural gas because it has a different chemical makeup compared to natural gas. ☐ True ☐ False

Finish Quiz

**N'est-il pas incroyable que les agriculteurs soient capables de capturer le méthane des vaches laitières pour produire du GNR?**

Les agriculteurs ont le potentiel de produire un gaz naturel renouvelable de très haute qualité grâce à la richesse en méthane des déchets agricoles.

Dans mon installation, nous produisons du GNR, également connu sous le nom de biométhane, en capturant le biogaz libéré par le fumier de nos vaches laitières.

Un troupeau de 100 vaches laitières peut produire suffisamment de GNR pour chauffer 12 maisons, alors imaginez combien de GNR on peut produire avec 3 800 vaches!

**eco360**  
x425

Eco360 Sub-Est, une installation de GNR près de Moncton, au Nouveau-Brunswick, capte assez de méthane pour alimenter environ 425 maisons chaque année à partir des déchets municipaux!

Suivante

Alors que les coûts de construction sont plus élevés pour la production d'électricité éolienne au large des côtes, dans cet environnement, le vent souffle plus rapidement et plus régulièrement par rapport à la terre ferme (ce qui signifie que l'énergie éolienne sera plus fiable). Un autre facteur important à prendre en compte est l'utilisation des terres! Il n'y a qu'un nombre limité d'emplacements disponibles pour l'éolien terrestre, alors que l'éolien au large des côtes offre de nouveaux espaces pour construire des sources d'énergie renouvelables.

L'éolien joue un rôle important dans notre transition vers la carbonneutralité au Canada atlantique, et nous avons déjà un bon départ avec des parcs éoliens dans les quatre provinces de l'Atlantique. Les projets éoliens terrestres sont les plus communs, et des communautés et des entreprises des Premières Nations comme **Natural Forces**, **ABO Wind** et **l'Institut de l'énergie éolienne du Canada (WEICan)** ont investi dans l'industrie éolienne.

Précédent

Suivante

**biofuels 101**

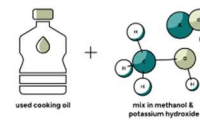
# Clean Fuel Learning Pathway Snapshots

When it comes to RNG, the quality of the fuel can be measured on a variety of factors, even down to looking at if a truck is used to transport the gas. In the renewable natural gas industry, this measurement is known as the **carbon intensity** of the gas.

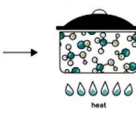
Think of making renewable natural gas like making a cake: different ingredients and flavours will create different products!



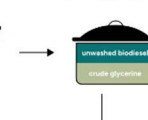
The feedstock goes through a chemical process called "**transesterification**" (yep, that's a term that took me a long time to get used to saying!).



Once that process is complete it is then refined and blended with petrocrack for use in things like school buses, transit buses, and heavy construction equipment.



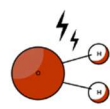
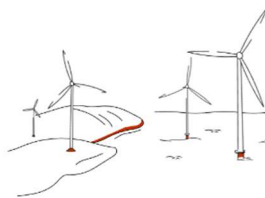
These types of transportation are some of the most popular which means they contribute the most to our GHG emissions. So anything we can do to reduce carbon emissions in transportation is good, right?



Just like about baking, using the same ingredients can create different outcomes.

Here in Atlantic Canada, we're lucky to have an excellent wind resource because we're on the coast.

We can harness both onshore and offshore winds by building wind turbines to generate electricity. The blades of the wind turbines spin from the force of the wind, and that energy is then converted into electricity. Onshore and offshore turbine blades are specially designed to maximize the amount of wind they capture and the main differences between the two technologies are the size and the support structures. Offshore wind turbines don't have the same size and height constraints as onshore, so they can be a lot larger (even double the size!).



**Eastward Energy** is exploring low-carbon hydrogen produced through electrolysis using clean electricity for making the best use of natural gas infrastructure in the future.

In fact, there are lots of companies in Atlantic Canada working on incorporating clean hydrogen into their systems, but until we have the capacity to produce large volumes of clean energy, hydrogen can be made with non-renewable energy.



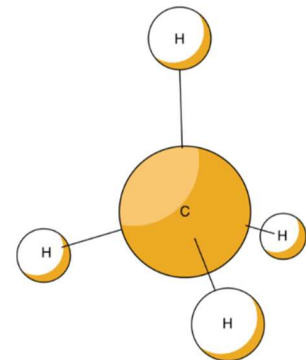
**Irving Oil** in Saint John, New Brunswick uses hydrogen to lower the sulphur content of petroleum products like diesel fuel.



**Braya Renewable Fuels** in Come By Chance, Newfoundland is in the process of converting their facility to produce hydrogen from biomass feedstocks.

Je sais ce que tu penses :

« Qu'est-ce qu'une ferme à voir avec l'aide à l'environnement? »



Le produit du gaz naturel renouvelable (GNR), une alternative plus propre et renouvelable qui remplacera le carburant fossile connu sous le nom de gaz naturel. C'est un sujet que je suis ravi de partager avec toi aujourd'hui!

La plupart de nos émissions de GES au Canada sont le résultat de la production et de la consommation d'énergie:

- comme l'utilisation du diesel et de l'essence pour transporter des marchandises,
- l'utilisation du charbon pour produire de l'électricité
- et l'utilisation du gaz naturel pour chauffer les maisons et les entreprises.



Les carburants propres tels que le gaz naturel renouvelable et l'hydrogène propre émettent beaucoup moins de GES que les **carburants fossiles** que je viens d'énumérer.

Si tu veux en savoir plus sur ces choses, clique sur le lien ci-dessous pour t'orienter à la suite de ce module.

Des sources d'énergie formées sous terre au cours de millions d'années. Les trois principaux types de combustibles fossiles sont le gaz naturel, le charbon et le pétrole.



Précédent

Suivante

Final Check-In

Are you press the "finish quiz" button below before moving on to the next slide!

Do you match the aSMR term with the definition? Drag and drop the aSMR term to match it with the corresponding definition.

The next generation of nuclear reactors.

Advanced

Small

Modular

Size, energy output, and the amount of space the reactor takes up.

The way the aSMR components are manufactured in factories elsewhere and transported to be assembled on-site.



The next clean energy source we're going to look at is solar energy!



Watch on YouTube

# LEARNING PATHWAY RESULTS

## Registered Users

**Target: 100**

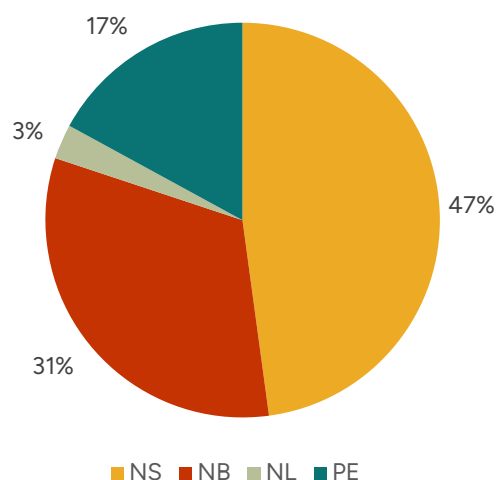
**Achieved: 360**

## Completed Learning Pathways Target: 500

**Achieved: 877**

Pathway	Completions
Riya's RNG Pathway	451
Lucas' Biofuels Pathway	228
Kristy's Clean Hydrogen Pathway	198
<b>Total</b>	<b>877</b>

Registered Learning Pathway Users by Province



Riya's Renewable Natural Gas learning pathway had the most interest, followed by Lucas' Biofuels pathway and Kristy's Clean Hydrogen pathway.

At the end of each pathway, students could reflect on what they learned. Here are some of the things students had to say:

*"There are so many different types of clean energy. I had no idea that our province was involved and developing and using all of these methods."*

*"The coolest thing I learned is that renewable fuel sources are going to become available for the aviation industry!"*

*"I didn't realize the pros of ethanol I just thought it was a dangerous chemical!"*

*"I learned that a lot of companies in Atlantic Canada are trying to work with clean hydrogen."*

*"The most interesting thing I learned was that renewable natural gas has the same composition as non-renewable gas after purification, so it gives me hope to see positive and optimistic changes being made for the fuel sector as I build toward my own future."*



# CLEAN FUELS AWARENESS SURVEY

The Clean Fuels Awareness Survey was available on [fuel4future.ca/survey](https://fuel4future.ca/survey) from September 2023 to March 2024. Post-secondary students, Indigenous youth, and the general public were encouraged to fill out the 20-question survey in order to learn what people know about clean fuels. The survey was available in English and French, and mini versions of the survey were administered at events.

SurveyLegend was selected as the survey software used for the Clean Fuels Awareness Survey. The software was affordable, easy to use, and allowed for brand customization on elements like colours, photos, and backgrounds.

The screenshot displays the SurveyLegend interface for the Clean Fuels Awareness Survey. It features a top navigation bar with question numbers 1 through 7, where question 2 is currently selected. The main content area is divided into three sections:

- English Question 1:** "Which of the following are clean fuels?" with a list of options, each preceded by an unchecked checkbox:
  - Renewable natural gas (RNG)
  - Fossil fuels
  - Hydrogen
  - Ethanol
  - Biomass
  - Nuclear power
  - Natural gas
  - Sustainable aviation fuel
  - Solar energy
  - Wind energy
  - Carbon dioxide
  - Hydropower
- French Question 2:** "Comment évalueriez-vous vos connaissances en matière de carburants propres?" (How would you evaluate your knowledge of clean fuels?). Below the question is a rating scale with five buttons labeled 1, 2, 3, 4, and 5. Underneath these buttons are the labels "Faibles" (Low), "Moyen" (Medium), and "Excellentes" (High).
- Map Question:** "Which Atlantic Canadian province has a nuclear power plant?" This question is accompanied by four map tiles of Atlantic Canadian provinces, each labeled with its abbreviation: NB (New Brunswick), NL (Newfoundland and Labrador), NS (Nova Scotia), and PE (Prince Edward Island). The maps for NB and NL are highlighted in green.

At the bottom of the interface, there is a footer that reads "Proudly made with SurveyLegend®" next to the SurveyLegend logo. To the right of the survey interface, there is an illustration of a person with dark hair, wearing a yellow shirt and orange overalls, sitting on a white bench and using a laptop.

# SURVEY SNAPSHOTS

True or false: An entire province can rely solely on wind and solar energy.



True

False



Do you agree or disagree with the following statements? Click the thumbs up for agree and thumbs down for disagree.

Hydrogen can be produced through the splitting of water into hydrogen and oxygen.



Renewable diesel can be made from used cooking oil.



An anaerobic digester can be used to capture and purify biogas, turning it into renewable natural gas (RNG).



Est-ce que nous avons amélioré tes connaissances sur les carburants propres?



1  
Non, je savais déjà toutes ces choses

2  
j'ai appris un peu

3  
Oui, j'ai TELLEMENT appris de choses

Quelle a été ta plus grande leçon à retenir ?

True or false: Hydropower created by dams is a renewable energy source.



True

False



Which Atlantic Canadian province has the most biomass production plants?



NB

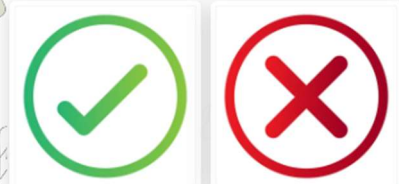
NL

NS

PE



Les carburants propres devraient jouer un rôle essentiel dans les secteurs « difficiles à décarboner ».



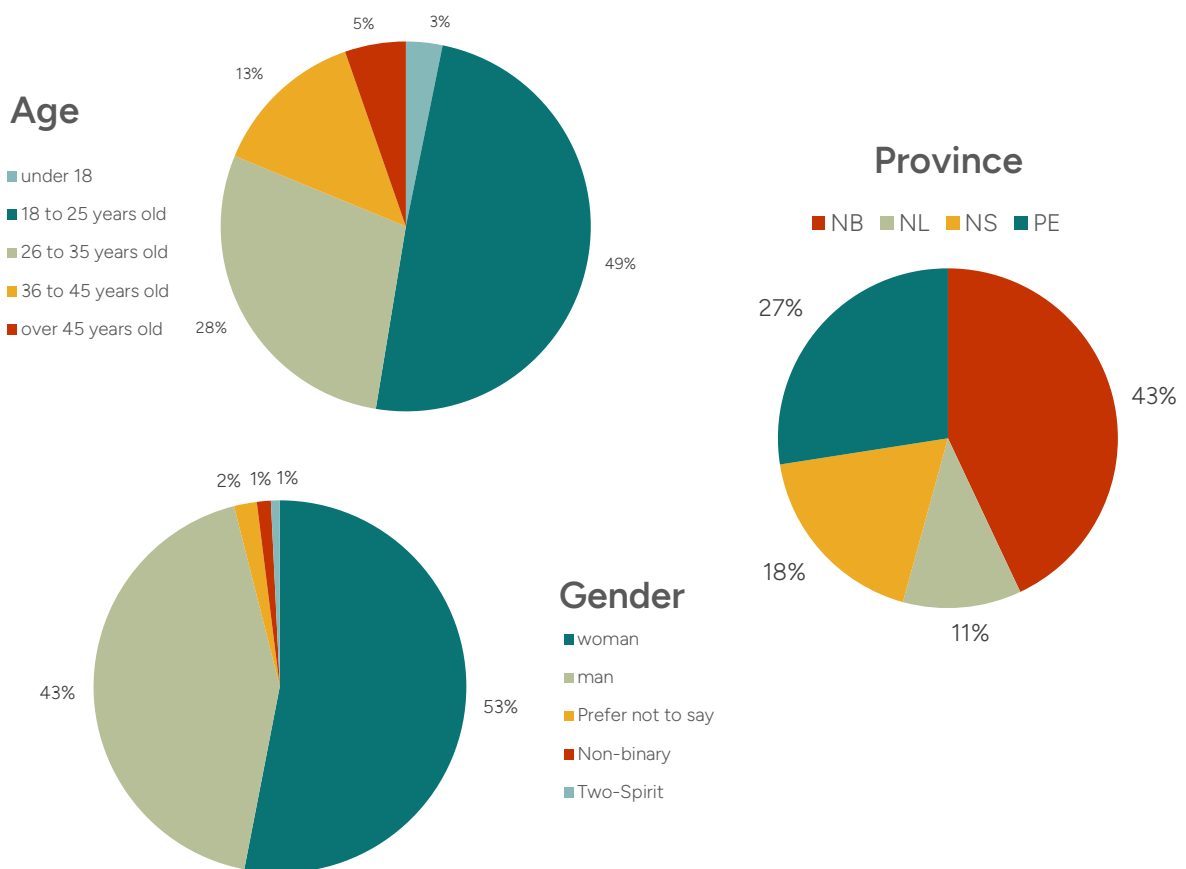
vrai

faux

# SURVEY FINDINGS

- 🔥 **1015/1000 survey responses collected** that gathered information on current knowledge of clean fuels and knowledge following in-class presentations.
- 🔥 The survey included questions related to general energy literacy and more specific topics related to the energy sector here in Atlantic Canada.
- 🔥 While hosting and participating in events, the F4F team administered mini surveys consisting of 4 clean fuels-related questions, and in return for completing the survey, students were given Fuel 4 the Future swag. Post-secondary students and Indigenous youth who completed the surveys were entered in the draw for \$500 bursaries.

## Who completed the survey?





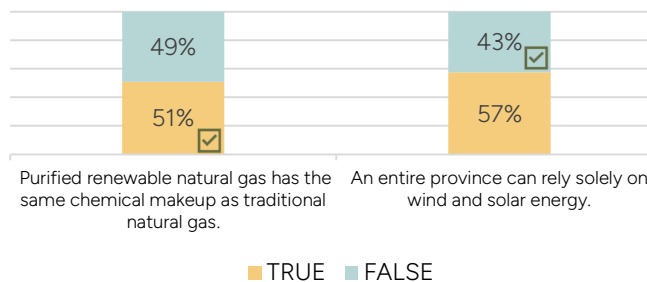
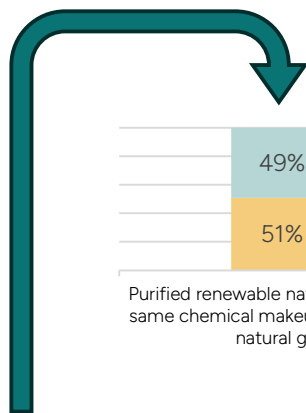
# SURVEY FINDINGS

## What are people missing?

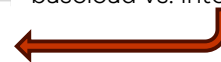
Overall, respondents have little knowledge of biofuels. When asked to identify clean fuel sources, people picked natural gas over biofuels like biomass, ethanol, renewable diesel, and sustainable aviation fuel.



Which of the following are considered clean fuels?



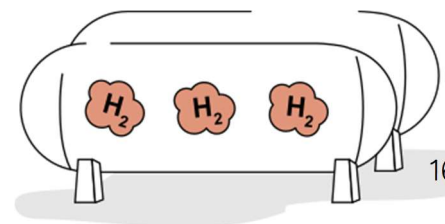
57% of respondents believe that wind and solar can power an entire province, which could speak to a misunderstanding or unawareness for baseload vs. intermittent energy sources.



Respondents have a general knowledge about the basics of clean fuels like what they are, but they don't know the details of how clean fuels work. For example: renewable natural gas and natural gas both have the same chemical makeup ( $\text{CH}_4$ ), but respondents were split 51% to 49% about whether they thought this fact was true.

## Surprising results

- Student respondents lack knowledge about energy sources in Atlantic Canada outside of their own province. When doing the mini surveys with students many of them said they didn't know the answers and asked their friends. There was no "unsure" option because the F4F team wanted the students to really think about it, and while a lot of respondents did get the questions correct, there's no way to know if it was a very good guess or not.
- Many respondents recognized Irving Oil as a player in the clean fuels industry. Other popular options were companies with "energy" in the title or other variations of clean terms like solar, renewable, natural, etc. Options that were less chosen were Emera Inc., Liberty, Kinectrics, and the Port of Belledune.



# FUEL 4 THE FUTURE BURSARIES

Post-secondary students and Indigenous youth who completed the Clean Fuels Awareness Survey and/or the Clean Fuels Learning Pathways were entered in the draw for Fuel 4 the Future bursaries.

Fuel 4 the Future offered post-secondary students and Indigenous youth who completed at least one learning pathway the chance to win a \$1000 bursary. They also had the opportunity to win two \$500 bursaries for completing the Clean Fuels Awareness Survey. One \$500 bursary was open exclusively to Indigenous youth and the other was open to all post-secondary students and Indigenous youth.

## \$1000 Clean Fuels Learning Pathways Bursary

**Target Entries: 100**

**Achieved: 387**

**Winner:**

Oluwakemi Elegbede,  
NBCC

## \$500 Clean Fuels Awareness Survey Bursary for Indigenous Youth

**Target Entries: 50**

**Achieved: 100**

**Winner:**

Jacob Delaney,  
Holland College

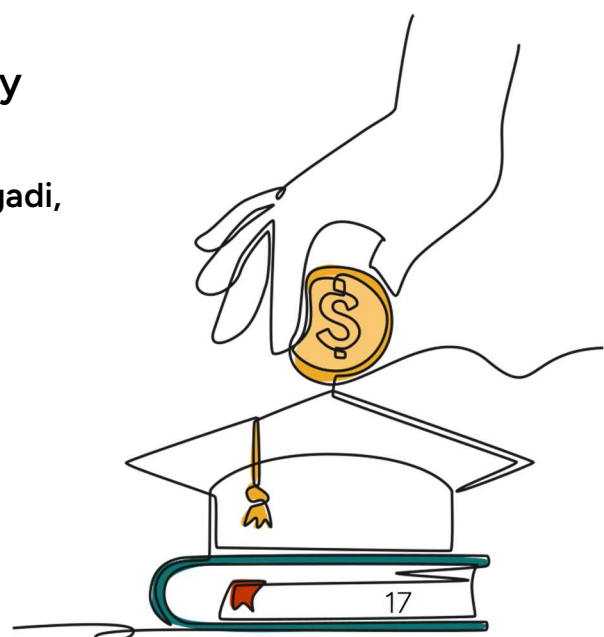
## \$500 Clean Fuels Awareness Survey Bursary

**Target Entries: 150**

**Achieved: 803**

**Winner:**

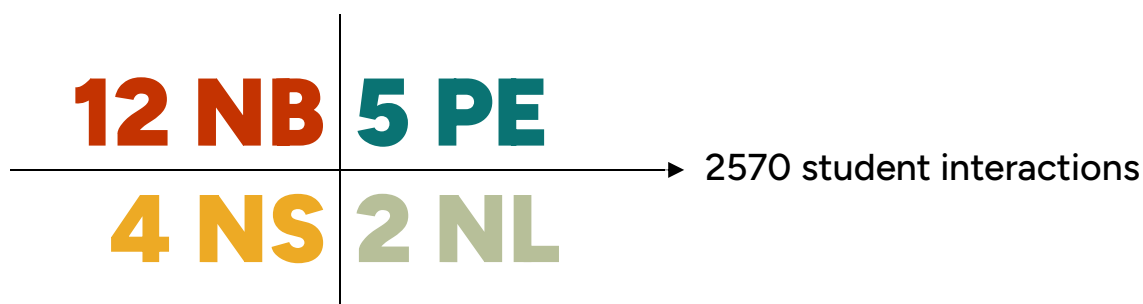
Michel Ndjoo Tengadi,  
CCNB



# POST-SECONDARY ENGAGEMENT

From September 2023 to March 2024 the F4F team engaged with 2500+ students in-person.

During the course of the project, the goal was to host six to eight events throughout Atlantic Canada. Fuel 4 the Future supported one event, participated in 11 events, and hosted 12 events across Atlantic Canada, for a total of **23** in-person events and **1** virtual (see page 19 for complete list).



## Highlights

**1** live webinar hosted with Net Zero Atlantic, available in perpetuity.

- Industry partner participation: Port of Halifax, Dalhousie University, and ABO Wind
- 160 virtual participants

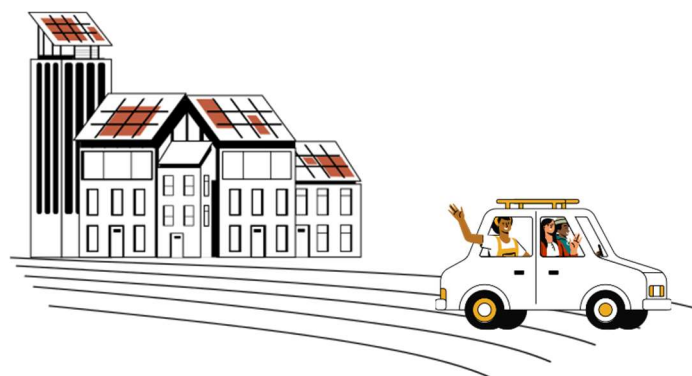
**1** live in-class event was hosted in a hybrid format available to all 5 New Brunswick Community College campuses.

- Industry partner participation: Irving Oil, Liberty, and ABO Wind
- 35 participants

**2** Indigenous engagement events (see page 20) + Indigenous-Led Energy Symposium.

**1** event hosted in-person at Collège Communautaire du Nouveau-Brunswick in French.

- Industry partner participation: Port of Belledune, Atlantica Centre for Energy
- 130 participants



# POST-SECONDARY ENGAGEMENT

Institution	Province	Event	Date	Type	Number of Students	Role
UNBSJ	NB	Sustainability Networking Fair	11-Oct-23	In-Person	20	Participant
NB Indigenous Career College	NB	NB Indigenous Career College	17-Oct-23	In-person	24	Host
North Shore Micmac Tribal Council	NB	Indigenous-Led Energy Symposium	22 to 24-Oct-23	In-person	150	Participant
NBCC	NB	NB Power Presentation	09-Nov-23	In-person	20	Host
NBCC	NB	Saint John Career Fair	26-Jan-24	In-person	195	Participant
NBCC	NB	Moncton Career Fair	01-Feb-24	In-person	183	Participant
UNB	NB	Fredericton Career Fair	13-Feb-24	In-person	104	Participant
NBCC	NB	Woodstock Career Fair	14-Feb-24	In-person	70	Participant
UNB	NB	Saint John Career Fair	20-Feb-24	In-person	110	Participant
NBCC	NB	Webinar with Irving Oil Ltd., ABO Wind, Liberty	05-Mar-24	In-person and Virtual	35	Host
UNB	NB	Class Presentation with Liberty	20-Mar-24	In-person	25	Host
CCNB	NB	Class Presentation with Port of Belledune	26-Mar-24	In-Person	130	Host
MUN and CNA	NL	Career & Graduate School Fair	27-Sep-23	In-person	300	Participant
econext	NL	Ideathon Support	1 to 3-Mar-24	In-person	36	Support
NSCC	NS	Ivany Campus Visit	06-Feb-24	In-person	52	Host
Dalhousie University	NS	Career Fair	07-Feb-24	In-person	236	Participant
CBU	NS	Career Fair	07-Mar-24	In-person	325	Participant
CBU Unama'ki College	NS	Campus event	08-Mar-24	In-person	10	Host
Holland College	PE	Summerside Campus event	20-Nov-23	In-person	54	Host
Holland College	PE	Charlottetown Campus event	21-Nov-23	In-person	110	Host
Holland College	PE	Georgetown campus event	22-Nov-23	In-person	17	Host
Holland College	PE	Charlottetown Campus event	12-Mar-24	In-person	67	Host
UPEI	PE	Career Fair	13-Mar-24	In-person	210	Participant
Net Zero Atlantic	NB, NL, NS, PE	Webinar with Port of Halifax, ABO Wind, Clean Technologies Research Institute at Dalhousie University	08-Feb-24	Virtual	87	Host
Total					2570	



# INDIGENOUS ENGAGEMENT

**Two** consulting groups were called upon throughout the course of the project to make recommendations on all materials and branding from an Indigenous perspective.



The F4F team hosted **two** on-campus events for Indigenous college and university students:



The team spoke with **40 students** in-person about clean fuel topics at the New Brunswick Indigenous Career College and Unama'ki College at Cape Breton University.

Fuel 4 the Future participated in the 2023 Atlantic Indigenous-Led Energy Symposium in Moncton, NB, and engaged with approximately **150 industry experts and stakeholders** in the energy sector.

**100** self-identified Indigenous youth completed the Clean Fuels Awareness Survey, and **38** Indigenous youth completed at least one learning pathway.

*"The most exciting thing I learned is how great our Atlantic provinces come together to innovate ways to generate energy and create a sense of healing in our surroundings and homes. I am very proud to live my whole life here and to see our people come together and develop projects that benefit everyone. I believe it's a great initiative to improve our ways of creating renewable energy that helps fight against the climate crisis and protect our mother earth."*

*"RNG as a source of sustainable power was rather intriguing. As an aspiring electrical engineer, the prospect of carbon-neutral energy production without creating new distribution infrastructure is something I was not aware was possible."*

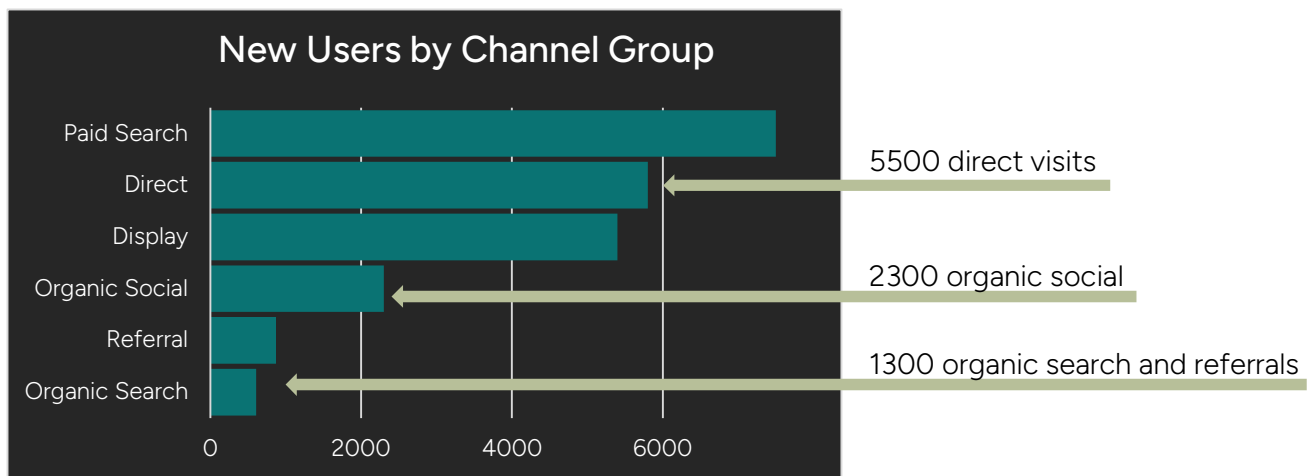
*"Renewable energy really can work, and I learned there's more than one type of reactor for nuclear power."*

*"The coolest thing I learned was that wood pellets and sawdust can be used to heat your home."*

# WEBSITE & SOCIAL MEDIA ENGAGEMENT

## Website

Fuel4future.ca garnered more than **18,000** unique users from September 2023 to March 2024. The project launch announcement in the Atlantica Centre for Energy newsletter generated **3500** visits to the website. The Resource page had more than **2000** tracked interactions over the course of the project.



## Social Media

The F4F team utilized [Facebook](#), [Instagram](#), and [LinkedIn](#) to connect with students and industry members and to promote the project. The organic social media strategy focused on posting basic information about clean fuels, sharing fun facts about the clean fuels sector, and highlighted companies and organizations in the industry in Atlantic Canada.

### LinkedIn

Profile views = **666**

Impressions = **11.7K**

### Instagram

Profile visits = **256**

Total reach = **595**

### Facebook

Profile visits = **1K**

Total reach = **79.3K**

Organic reach = **912**

Paid reach (ads) = **78.6K**





# SOCIAL MEDIA SNAPSHOTS

## CAREER PROFILE



Fuel 4  
the Future

FUEL4FUTURE.CA

fuel4thefuture  
and  
arccleantechnology



fuel4thefuture ARC Clean Technology is a clean energy technology company developing the ARC-100, an advanced small modular reactor (aSMR) offering inherently safe, reliable, and economical carbon free power. The company established its Head Office in Saint John, NB, and the ARC-100 was selected by @energie\_nb\_power for implementation on their Point Lepreau site.

ARC Clean Technology is always looking for exceptional people to bring new ideas, fresh thinking, and the motivation to help develop this First-of-a-kind and the growing organic Technology career profile.



Fuel 4 the Future | L'énergie de l'avenir  
204 followers  
2mo •

Marine Renewables Canada is the national association for tidal, offshore wind, wave, and river current energy. As part of its focus on developing the sector, Marine Renewables Canada is active in catalyzing opportunities for how marine renewable energy can contribute to achieving decarbonization goals through the production of green fuels such as hydrogen, as well as displacement of diesel in remote communities and marine industries.

To learn more about how Marine Renewables Canada is accelerating Canada's clean energy transition, check out the company profile: <https://lnkd.in/g/C6RW4t>

## COMPANY PROFILE



marine  
renewables  
canada



Fuel 4  
the Future  
FUEL4FUTURE.CA

ENERGIEDELAVENIR.CA

L'énergie  
de l'avenir



Quel est le lien entre les  
bovins et le gaz  
naturel renouvelable?

Découvrez cette réponse et bien d'autres à

ACHIEVING NET ZERO



Fuel 4  
the Future  
FUEL4FUTURE.CA

Fuel 4  
the Future

Congrats!

Jacob Delaney Your magnificent technician & trainer  
Michel Ndjoo Tengadi Your amazing welder  
Oluwakemi Elegbede Your amazing welder



Fuel 4 the Future | L'énergie de l'avenir

203 followers  
3mo •

As the energy sector transitions to focus more on clean fuels, there will be lots of job opportunities on the horizon! Have you ever considered a career in the clean fuels industry?

Did you know...

In 2021, energy sector jobs  
in Canada paid an average  
of \$121,435 per year.

And nearly three-quarters of employees  
in the energy sector had more than a  
high school education.



Fuel 4  
the Future

INDUSTRY FUN FACT



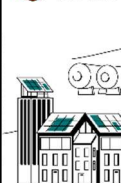
Fuel 4  
the Future



NBCC Saint John  
Career Fair  
January 26, 2024  
11:30 am - 3:30 pm

Fuel 4  
the Future

FUEL4FUTURE.CA



Hi friends, I'm Kristy. I dream  
about a future where clean  
energy sources fuel our lives.

One way this dream can become a reality is  
to produce clean hydrogen from sources  
like wind, solar, and nuclear. Let me know  
you how this will be possible!



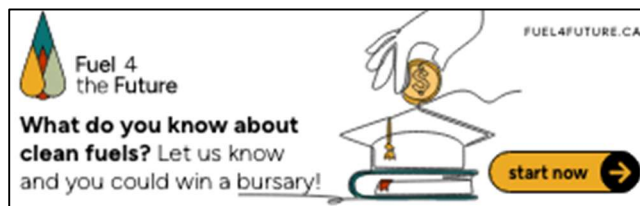
# AD CAMPAIGN

Fuel 4 the Future ran an ad campaign from December 13, 2023, to January 31, 2024, on Google and Meta (Facebook and Instagram). ICS Creative Agency developed the campaign with the goal of raising awareness for the project and generating submissions for the Clean Fuels Awareness Survey.

**Budget: \$5,000**

**Budget Spent: \$4,231.55**

Meta		Google	
60% of focus		40% of focus	
Impressions	Clicks	Impressions	Clicks
749,669	6,351	3,442,353	13,062





# FINANCIALS

The overall approved budget for the project was \$313,875. Due to changes in staffing and delay in finalizing online resources, the project came in well under budget.

## Expenses

Overhead	\$	28,847.57
Capital Expenses	\$	3,236.15
Professional Services	\$	75,450.88
Travel	\$	18,386.41
Staff	\$	124,977.45
Bursaries	\$	2,000.00
	\$	<b>252,898.46</b>

## Revenue

NRCan*	\$	177,773.45
Atlantic Workforce Partnership	\$	57,125.00
Atlantica Centre for Energy	\$	3,000.00
Emera Brunswick Pipeline	\$	5,000.00
Liberty	\$	5,000.00
Saint John LNG	\$	5,000.00
	\$	<b>252,898.45</b>

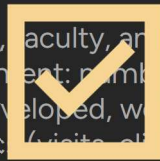
\* Natural Resources Canada Clean Fuels Awareness Program



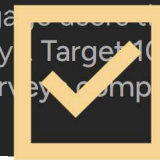
# PROJECT ACHIEVEMENTS

- 🔥 First Nations consultants were engaged in all development stages and provided valuable cultural insights.
- 🔥 Successful ad campaign resulted in more than 19,000 clicks and 4.1 million impressions for \$5000 investment.
- 🔥 Eight industry partners participated in the in-class presentations and webinar events. The F4F team tried to involve industry in career fair booths but partner companies were not properly equipped to do so.
- 🔥 Creative and content was well received by students. The illustrations were eye-catching, and the brand aesthetic spoke to the target audience.
- 🔥 The Fuel 4 the Future project finished under budget and exceeded all project KPIs.

Student, faculty, and industry engagement: number of new materials developed, website content analytics (visits, clicks, etc.).



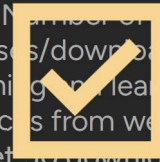
Engage users through survey. Target 1000 user survey completed.



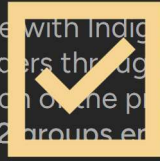
Target to host 6 to 8 in-person events and virtual events for students, educators, and industry.



Number of accesses/downloads of teaching or learning resources from website. Target 50 downloads.



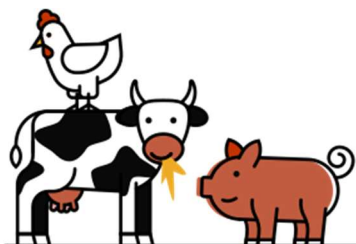
Engage with Indigenous stakeholders throughout the duration of the project. Target 2 groups engaged.



Number of Clean Fuels Pathways game participants. Target 500 users.



Total participation tracked a minimum of 5100 student participating in various aspects of Fuel 4 Future project.



# LEARNINGS

- 🔥 Interactive and engaging websites with custom features take more time to build than even the experts expected.
- 🔥 There needs to be a champion in post-secondary institutions to engage more in classrooms.
- 🔥 Career fairs are an excellent tool for visibility and student engagement.
- 🔥 Through engaging with industry, the F4F team found that employers are looking for opportunities to engage with students beyond career fairs. Industry is most interested in classroom engagement.
- 🔥 Bursaries and swag are a great incentive for action, but each school is different. Some students are mindful of their consumption habits while others take all the swag they can get.
- 🔥 Building momentum takes time! A lot of students' first reactions at career fairs were things like "I've never heard of Fuel 4 the Future, is it new?" and "Why haven't I heard of this program before?"

## Where do we go from here?

- 🔥 Legacy website content will remain online at [fuel4future.ca](https://fuel4future.ca) as an educational resource provided by the Atlantica Centre for Energy.
- 🔥 Relationships have been built with post-secondary institutions and industry members throughout Atlantic Canada. How do we continue to foster these relationships so they can thrive?
- 🔥 Students are enthusiastic about learning more about clean fuels and opportunities to stay and work in Atlantic Canada. The project has informed the Atlantica Centre for Energy's energy literacy mandate.

