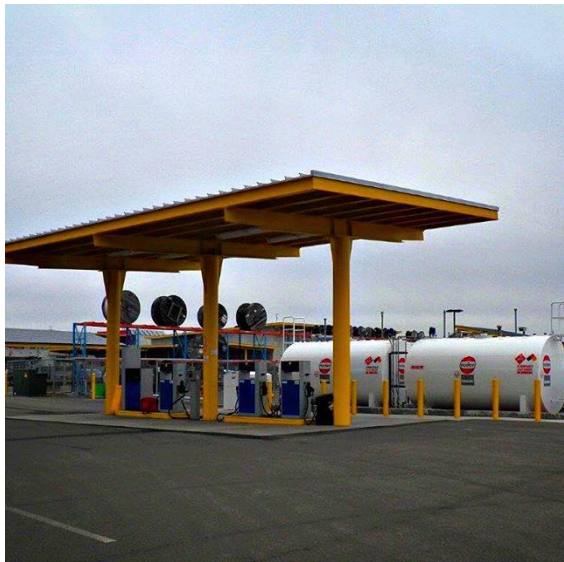


# Oregon Department of **ENERGY**

Oregon Energy Strategy  
Policy Working Group  
Low-Carbon Fuels  
Breakout Session #3

Michael Freels  
March 14, 2025





# OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, equitable, clean, and sustainable energy future.

## Our Mission

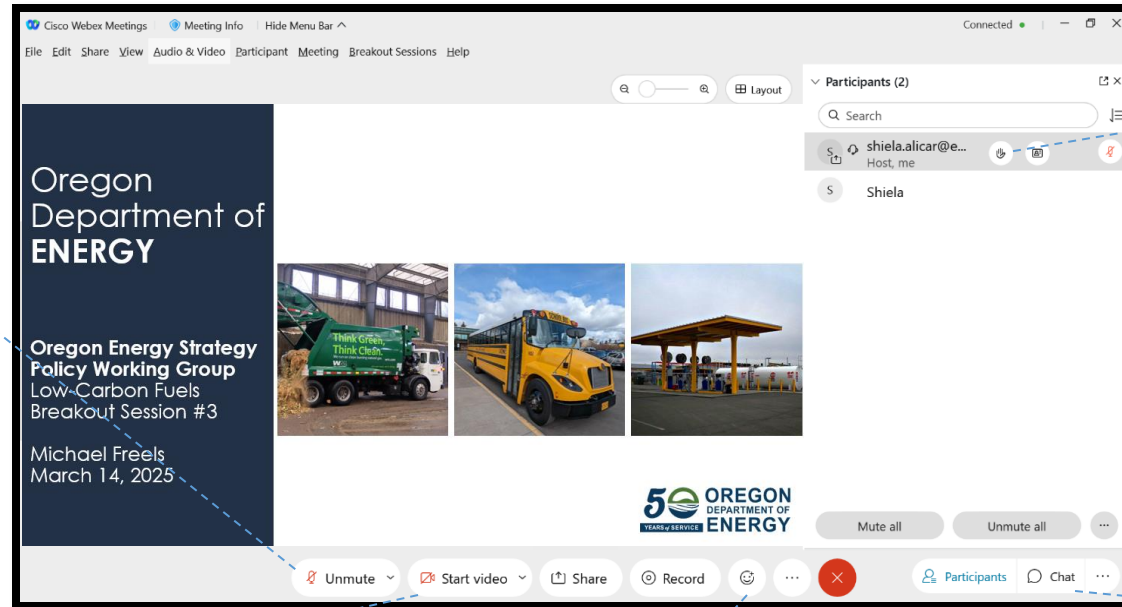
The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

## What We Do

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

# USING WEBEX



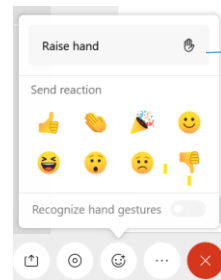
## Audio Options

- Mute *Microphone On*
- Unmute *Microphone Off*

## Video Options

- Stop video *Webcam On*
- Start video *Webcam Off*

## Reactions



Click to Raise your hand.

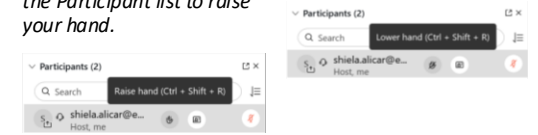


Click on Lower hand when you are done.

## Second Raise Hand Option

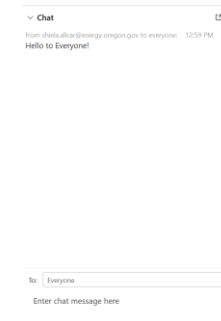
You can also click on the hand next to your name in the Participant list to raise your hand.

Click on Lower hand when you are done.

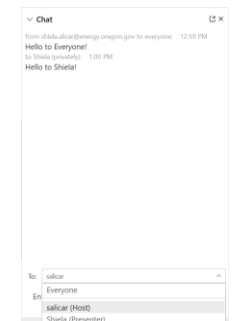


## Chat

You can chat to Everyone in the meeting.



You can send a private message to the Host or Presenter (or all Panelists when there is a Panel).



# INTRODUCTIONS

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Please share the following with the group in the chat:

- Name
- Affiliation
- Do you have fun Spring Break plans?



# ROLE OF WORKING GROUPS

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## What the role is:

- Substantively engage on results of modeling, technical analyses, and potential pathways
- Consider the costs and benefits of different pathways
- Identify barriers and policy gaps
- Surface near-term policy ideas for consideration

## What the role is *not*:

- Revisit the modeling inputs or analyses
- Determine a "best" pathway
- Vote on policy recommendations
- Make final decisions about policy recommendations
- Provide only voice informing this discussion

# STEP BY STEP PROCESS

Meeting 3

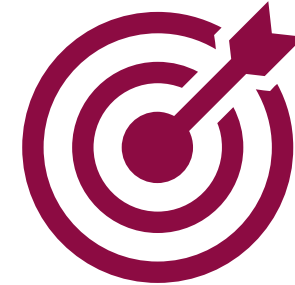
Meeting 4

Pathway	Issue Statement / Barriers	Strategy To Overcome Barriers	Policy Action
Declining Fuel Demand			
Low Carbon Fuel Development			
On Demand Resources for the Electricity System			
Strategic Adoption of Low Carbon Fuels			

# MEETING OBJECTIVES

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- Identify policy gaps or opportunities
- Discuss strategies to address the barriers
- Determine if we need to change an existing policy, create a new policy, or better understand a potential solution



# AGENDA

<b>9:00 - 9:05 am</b>	Welcome, Agenda, Introductions
<b>9:05 – 9:10 am</b>	Energy Model
<b>9:10 – 9:20 am</b>	Policy Working Groups
<b>9:20 – 10:30 am</b>	Identifying Strategies to Address Barriers
<b>10:30 – 10:40 am</b>	Break
<b>10:40 – 11:55 am.</b>	Identifying Strategies to Address Barriers
<b>11:55 – 12:00 p.m.</b>	Upcoming Meetings and Next Steps



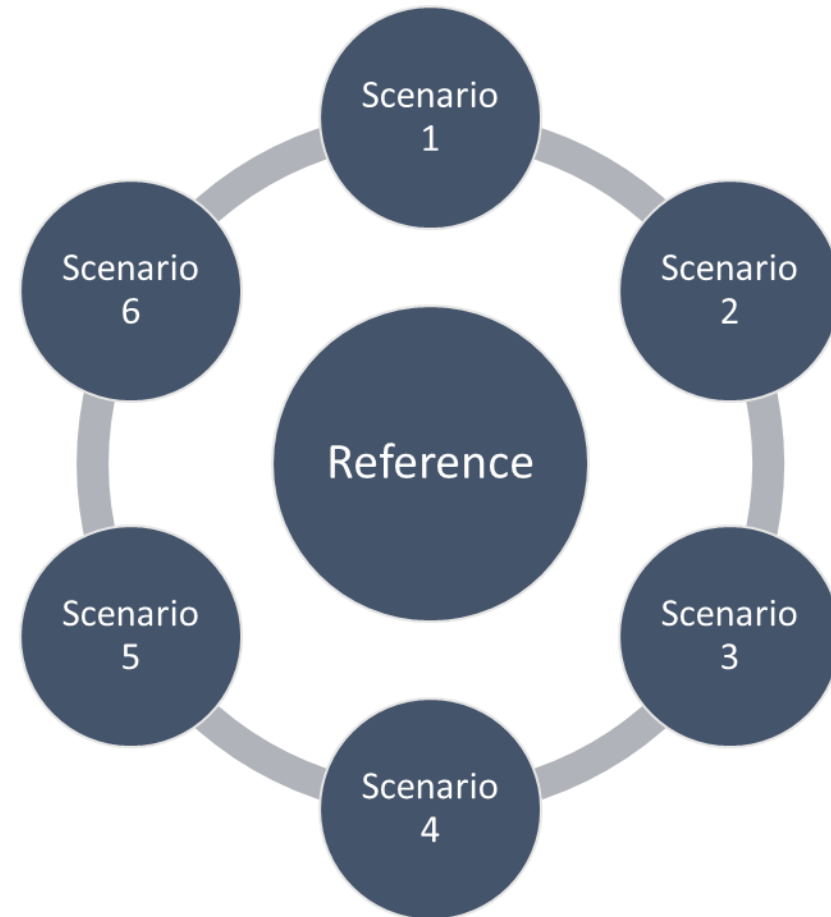
# GROUP AGREEMENTS

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- Honor the agenda or modify by agreement.
- Listen carefully; seek to learn and understand each other's perspective.
- Encourage respectful, candid, and constructive conversation.
- Keep an open mind.
- Ask questions to clarify and understand why.
- Be open, transparent, inclusive, and accountable.
- Respect differing opinions.
- Seek to resolve differences and find common ground.
- Be conscious of speaking time; step back to allow space for others to contribute.
- Limit chat conversations.

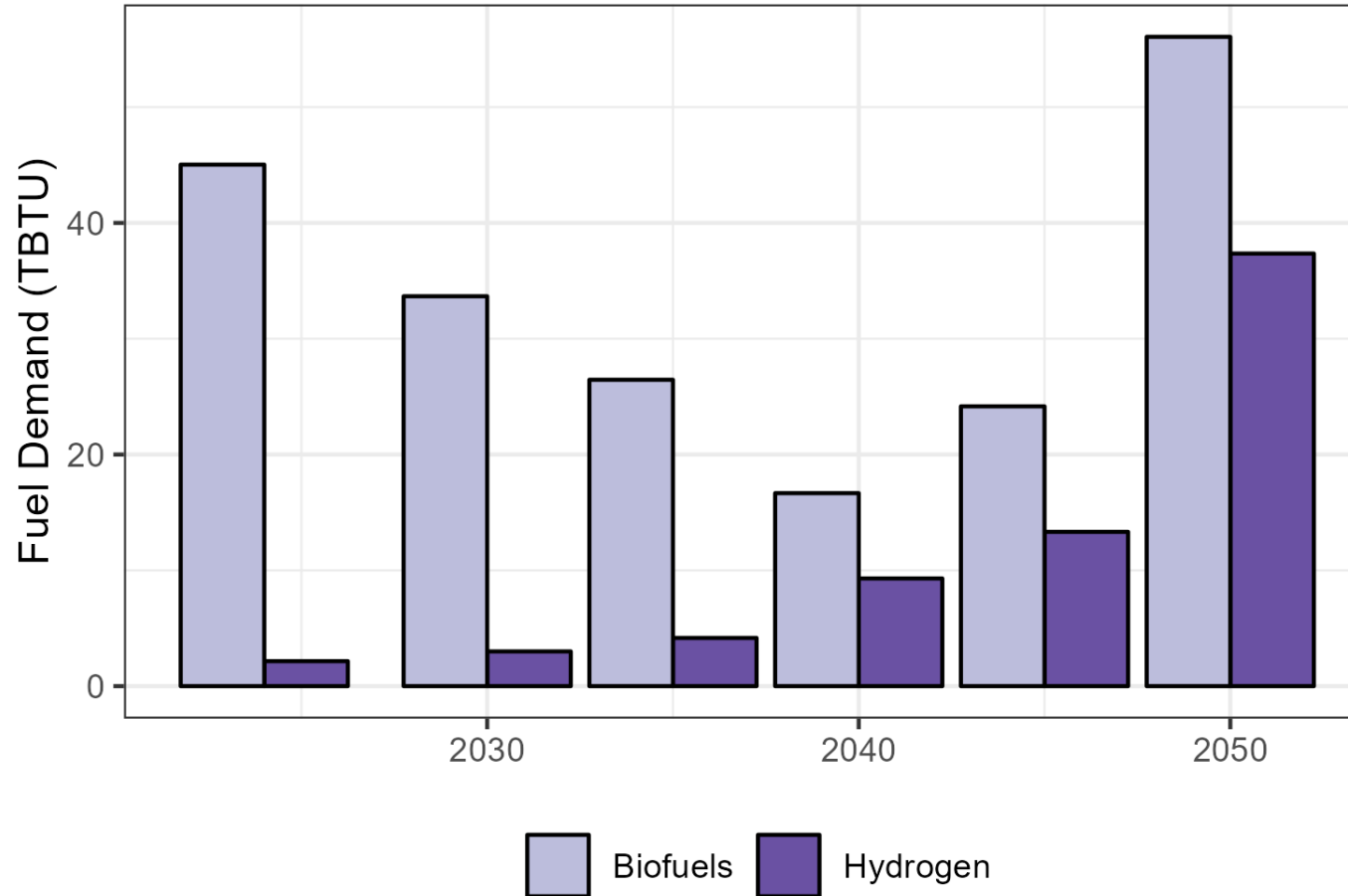


# Energy Model



# BIOFUEL AND HYDROGEN DEMAND

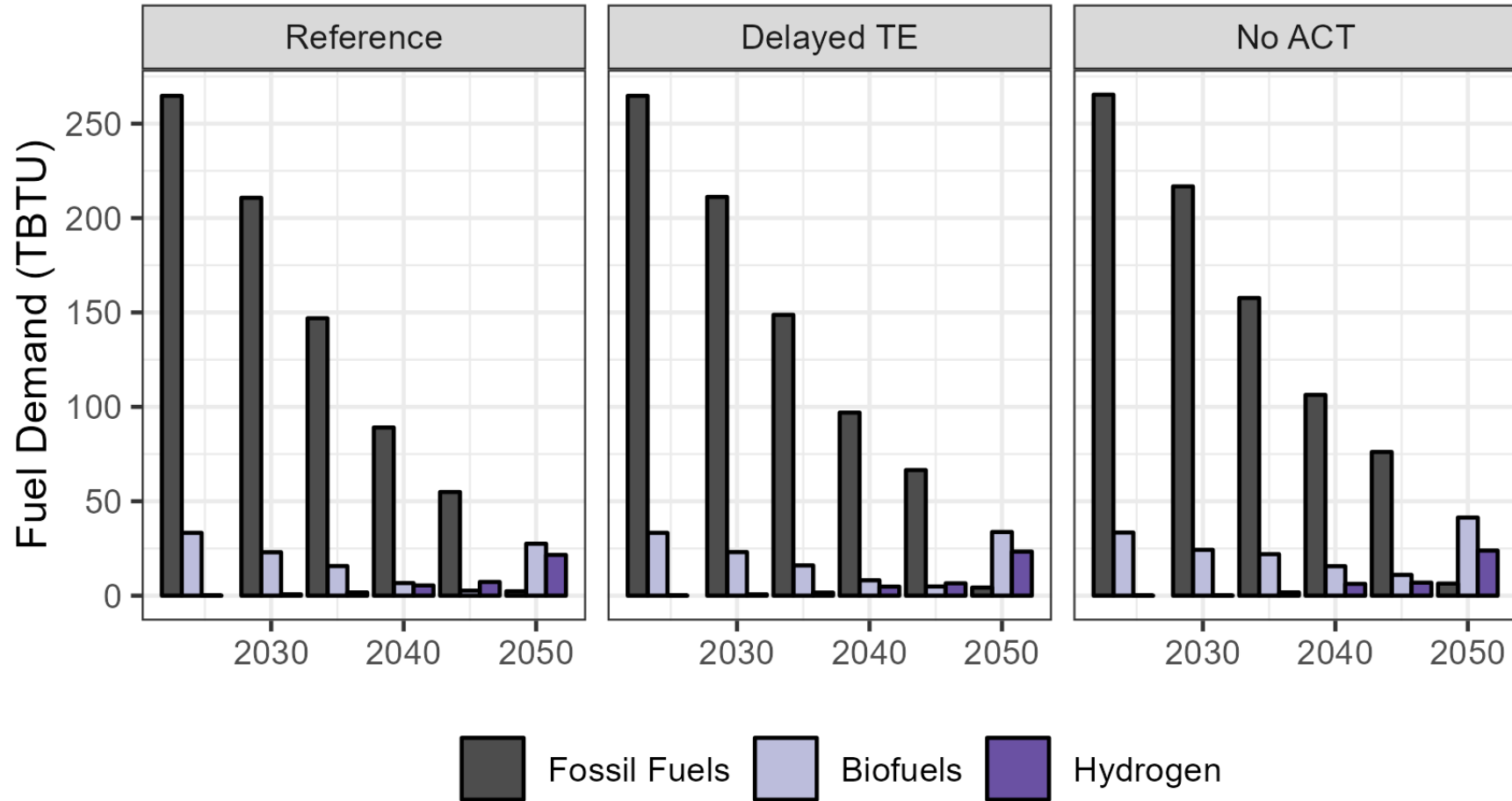
Biofuel & Hydrogen Demand in the Reference Scenario



Note: Biofuels are aggregated across feedstocks & sectors from Tab 26.  
Hydrogen is aggregated across fuel & zones from Tab 25.

# BIOFUEL AND HYDROGEN DEMAND

## Transportation Sector Fuel Demand



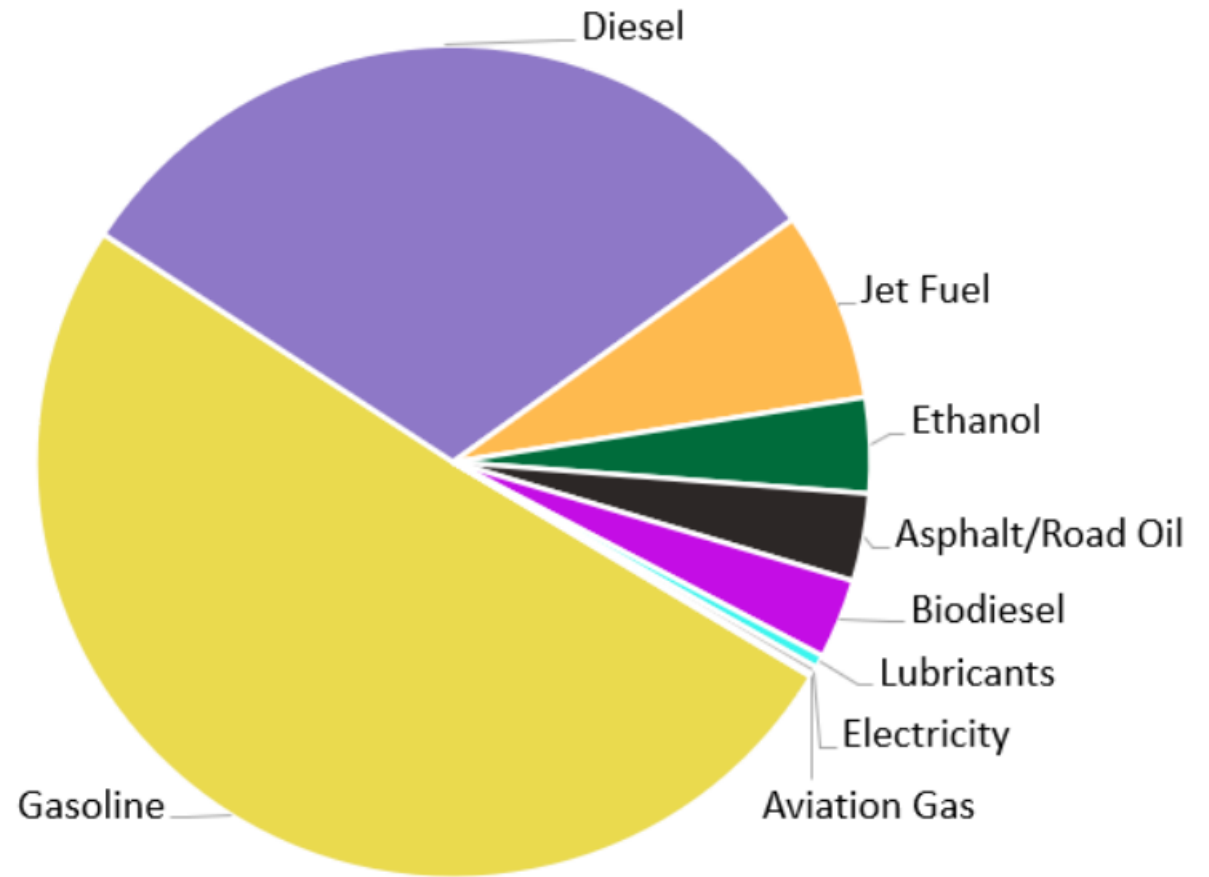
Notes: Hydrogen is aggregated across e-fuels, haber-bosch, and hydrogen liquefaction from Tab 11.

# 2022 TRANSPORTATION FUELS

36.7%

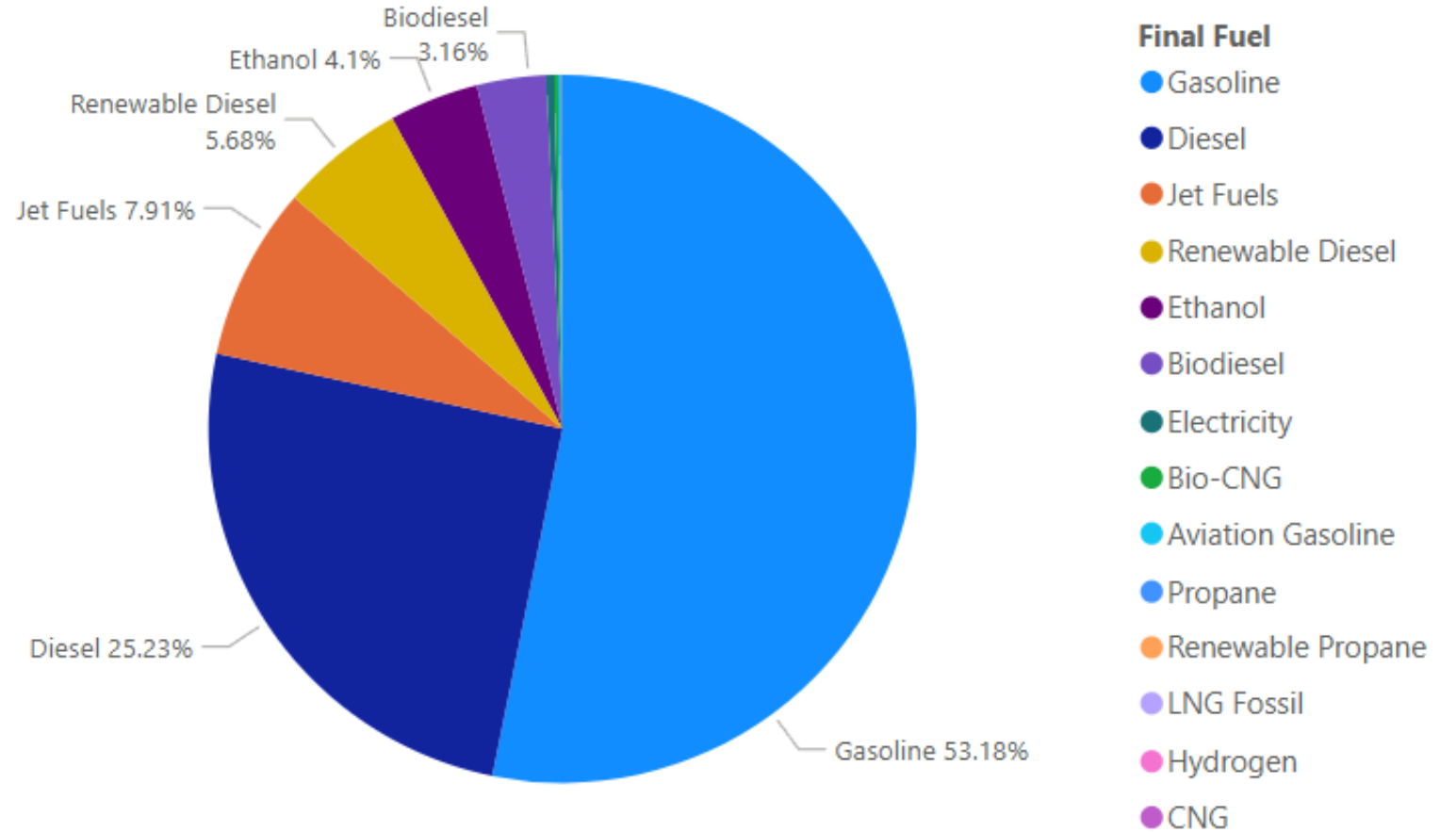
of Oregon's  
2022  
energy  
consumption<sup>3</sup>

50.6%	Gasoline
30.9%	Diesel
7.4%	Jet Fuel
3.7%	Ethanol
3.4%	Asphalt/Road Oil
3.1%	Biodiesel
0.5%	Lubricants
0.3%	Electricity
0.1%	Aviation Gas



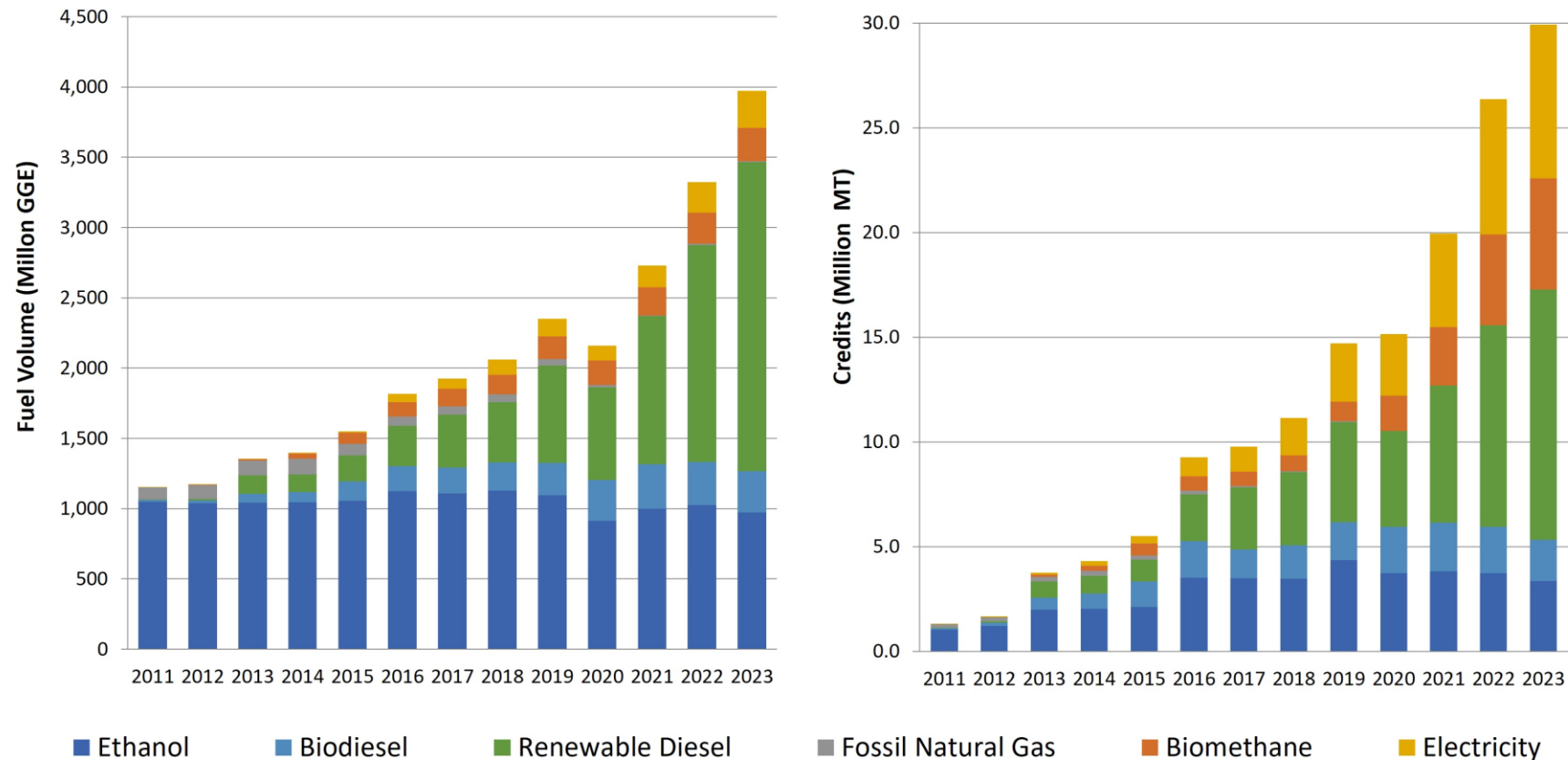
# 2023 TRANSPORTATION FUELS

Fuel	Volume (GGE)	Percent of Total
Aviation Gasoline	2,594,572.00	0.10%
Bio-CNG	4,307,865.00	0.17%
Biodiesel	79,554,425.00	3.16%
Bio-LNG	0.00	0.00%
CNG	15,306.00	0.00%
Diesel	634,235,737.00	25.23%
Electricity	9,106,188.00	0.36%
Ethanol	102,949,321.00	4.10%
Gasoline	1,336,844,169.00	53.18%
Hydrogen	15,543.00	0.00%
Jet Fuels	198,911,100.00	7.91%
LNG Fossil	24,260.00	0.00%
Propane	1,855,093.00	0.07%
Renewable Diesel	142,711,946.00	5.68%
Renewable Propane	542,442.00	0.02%
<b>Total</b>	<b>2,513,667,967.00</b>	<b>100.00%</b>



# CA LOW-CARBON FUEL STANDARD

## Alternative Fuel Volumes and Credit Generation



Last updated 04/30/2024

# Policy Working Groups



# ENVIRONMENTAL JUSTICE & EQUITY

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- Inclusion of Tribes:
  - Create pathways for Tribes to sell carbon offsets from wildfire prevention efforts
- Accessibility:
  - Increase access to low carbon fuels in rural areas
- Education:
  - Provide resources to communities in multiple languages and in accessible (nontechnical) language
  - Provide further research on who is being impacted by facilities that are polluting

# TRANSPORTATION ELECTRIFICATION

---

- High upfront & operational costs for ZEVs and infrastructure coupled w/a lack of sufficient incentives
- Limitations in MHD vehicle technology for certain use case and large learning curve for fleets to transition to ZEVs
- Long timelines and high costs for interconnection
- Lack of transit/transportation options in rural communities

# DEVELOPING CLEAN ELECTRICITY GENERATION AND TRANSMISSION

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- Current planning efforts are too siloed, including across electricity and gas
- Generally, limited information and decentralized planning and procurement efforts hinder efficient development in Oregon that equitably considers and accounts for all those affected.
- Differing perspectives on role of gas to support grid resilience
  - “Lack of holistic energy usage for state that includes direct use of gas and how it could be used sparingly to promote electric grid resiliency during winter peaks”
  - “Prohibitions on developing limited run thermal capacity”
  - “Mis/disinformation that fossil fuels are necessary for resilience”

# BUILDING ELECTRIFICATION, EFFICIENCY, AND DERS

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- Consumer education is needed to convey the benefits of efficiency and electrification upgrades.
- There is a lack of skilled workforce in many rural parts of the state.
- Some large commercial and industrial loads have no viable alternative to fossil fuels.
- Overall, long term energy planning would benefit from more coordination between gas and electric utilities.

# MIRO Activity

# QUICK MIRO HOW-TO: NAVIGATING

If you use a mouse:

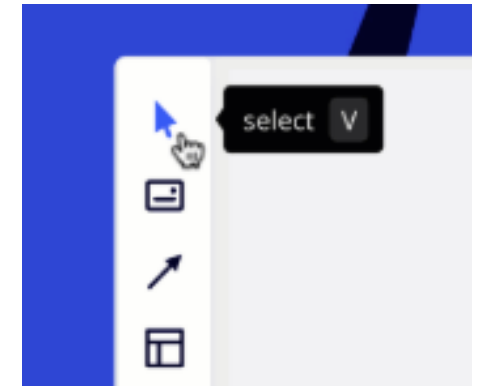
- To move around the board, press the right mouse button and drag
- To zoom, scroll the mouse wheel
- To create the selection field, switch to select tool, click and drag the canvas

If you use the trackpad:

- Slide two fingers to move around the board
- Pinch to zoom
- To select objects, switch to select tool, press and drag the canvas

If you use the touchscreen:

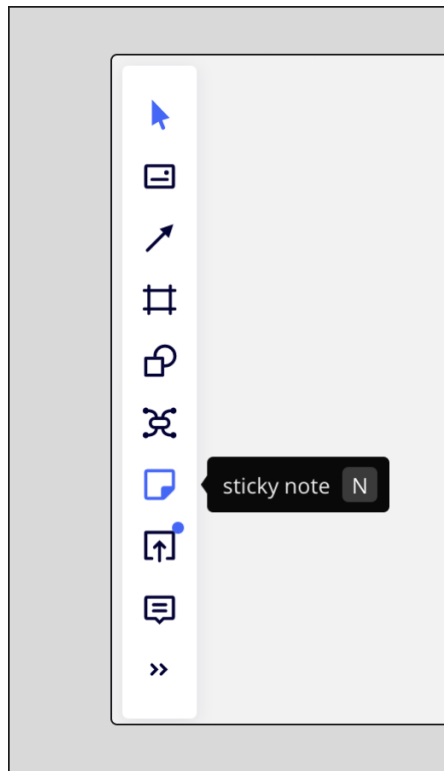
- Drag the canvas to move around
- Pinch to zoom
- Long press and drag to select objects



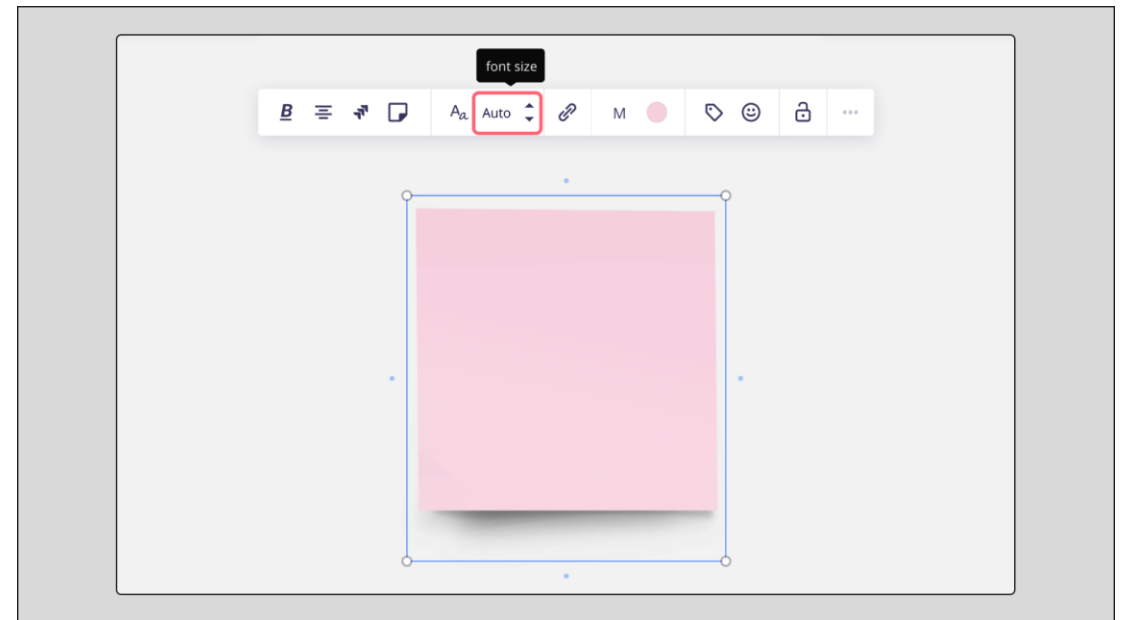
Switch between the 'select tool' and 'hand mode' in top left

# QUICK MIRO HOW-TO: STICKY NOTES

**Step 1:** “Click the sticky note icon on the toolbar” (left of screen)



**Step 2:** “To add text to your sticky note, select it and start typing.”



**10 MIN BREAK- Returning at 10:40am**



# MIRO Activity

# Next Steps

# UPCOMING MEETINGS

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<b>March 21</b> 10 a.m. – 11 a.m.	Modeling Office Hours- Environmental Justice and Equity Focus
<b>April 9</b> 10 a.m. – 11:30 a.m.	Complementary Analysis Info Session
<b>April 30</b> 2 p.m. – 5 p.m.	Low Carbon Fuels Policy Working Group Meeting #4
<b>May 21</b> 9 a.m. – 12 p.m.	Policy Working Group Plenary Final Meeting

# APRIL 30 MEETING AGENDA

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1. Complementary Analysis
2. Analysis of Policies in other states
3. Review Potential Strategies
4. Develop Policy Solutions



# FOR CONSIDERATION

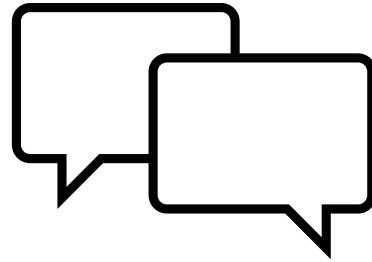
---



1. Are there any additional discussions we should be having in this group?
2. What additional policy solutions are you interested in discussing with this group?
3. What do we need to better understand?
4. How can we incorporate the Complementary Analysis into our potential policy recommendations?

# OPPORTUNITIES FOR PUBLIC COMMENT

---



Provide written public comment

<https://odoe.powerappsportals.us/en-US/energy-strategy/>

**Thank You!**

[www.oregon.gov/energy/Data-and-Reports/Pages/Energy-Strategy.aspx](http://www.oregon.gov/energy/Data-and-Reports/Pages/Energy-Strategy.aspx)

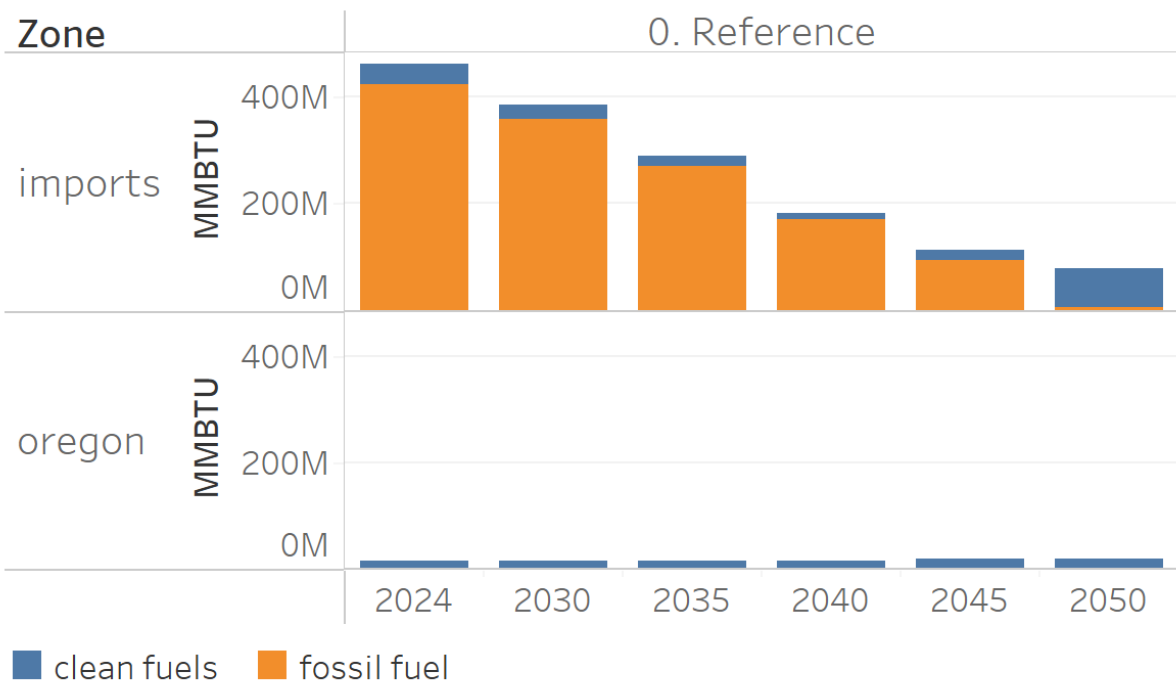
The End

Please ignore the following slides

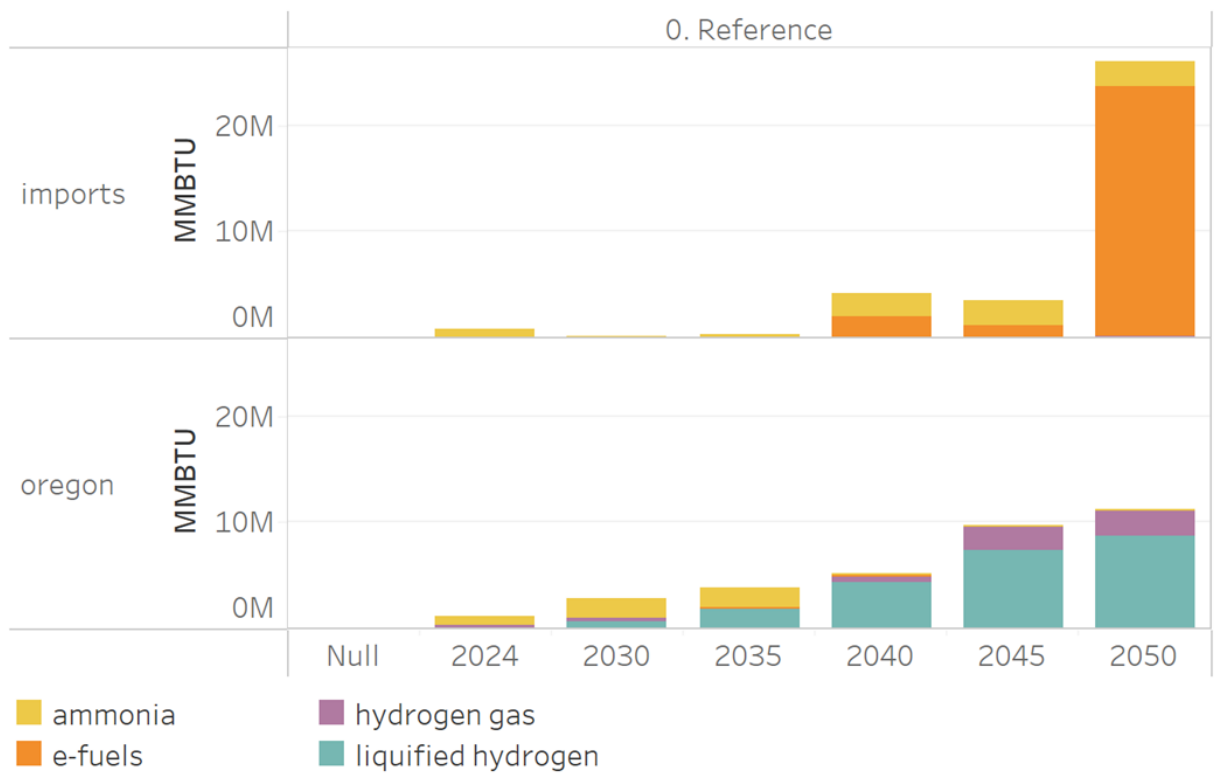


# Fuels: Imported vs. Produced in OR in Reference and Alternative Scenarios

Imported versus Oregon Produced Fuels



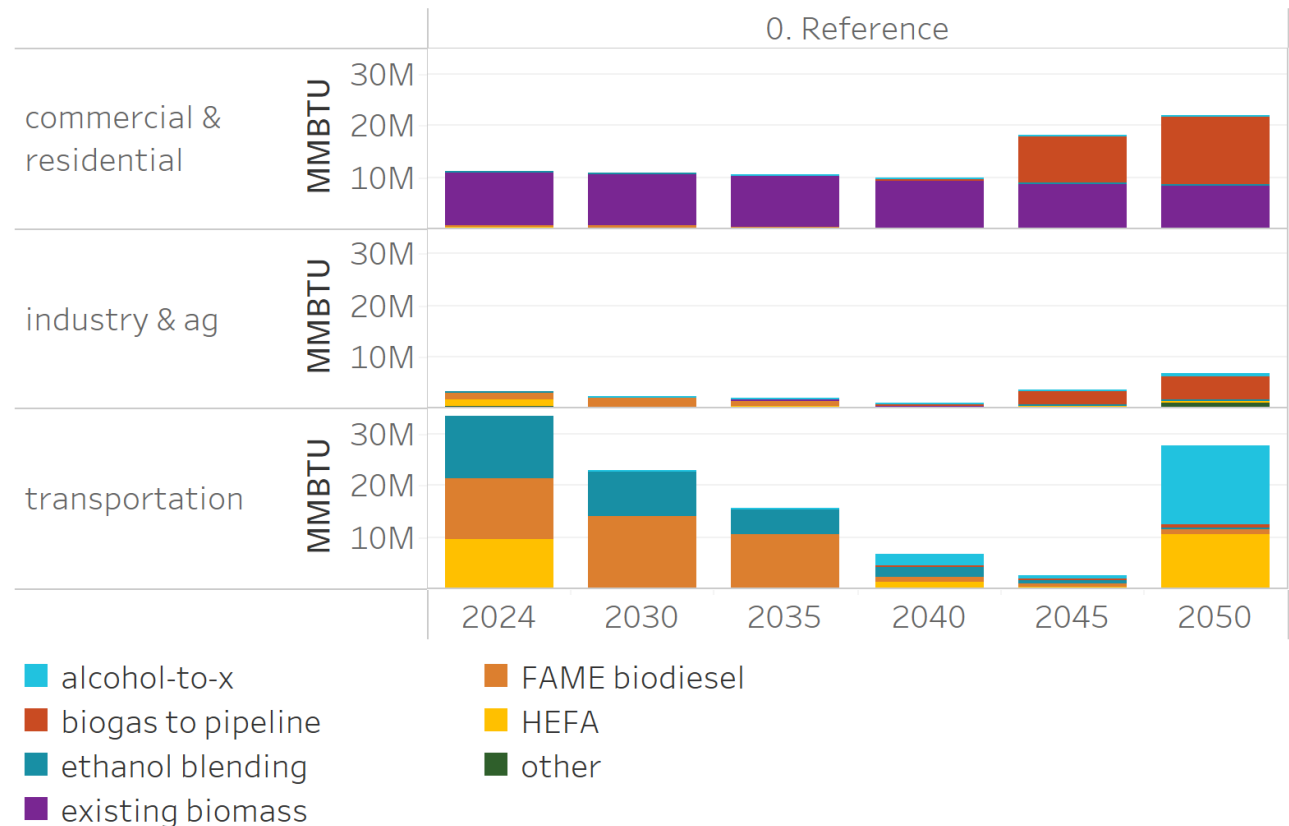
Origin of Hydrogen and Hydrogen Products used in Oregon



# Biofuels are Important to Decarbonize the Low Volumes of Remaining Fuel Use in 2050

- Biofuels in 2024 consist of wood burned in residences and biofuels in transportation, including HEFA, FAME, and ethanol
- Volumes in transportation decrease as the fleet is electrified and emissions from fossil fuels decrease, but increase in 2050 to decarbonize remaining fuel use
- Other sectors consume biogas in 2045 and 2050 to remove emissions from remaining gas use

Source of Biofuels



# CENTURY GOTHIC ALL CAPS 38 PT

---

## Subhead if you want to draw further attention to list

- Bulleted list
- Calibri Light 28 pt or 24 pt
- Black text



Add graphics and photos for visual interest, as appropriate (but don't overcrowd).

# CREATE MORE VISUAL INTEREST IN LISTS

---

## INFO

### Heading

Use white space to draw attention to different points you're making.

## INFO

### Heading

Use white space to draw attention to different points you're making.

## INFO

### Heading

Use white space to draw attention to different points you're making.



This is an alternate page layout. Good for slides where you introduce a topic (circle above), have a pithy explanation (this text box), followed by a list of examples (colored block on the right):

- Example 1
- Example 2
- Example 3
- Example 4
- Example 5

Attention-grabbing layout –  
good for presentation agenda

- Bulleted list in Calibri Light 24 pt

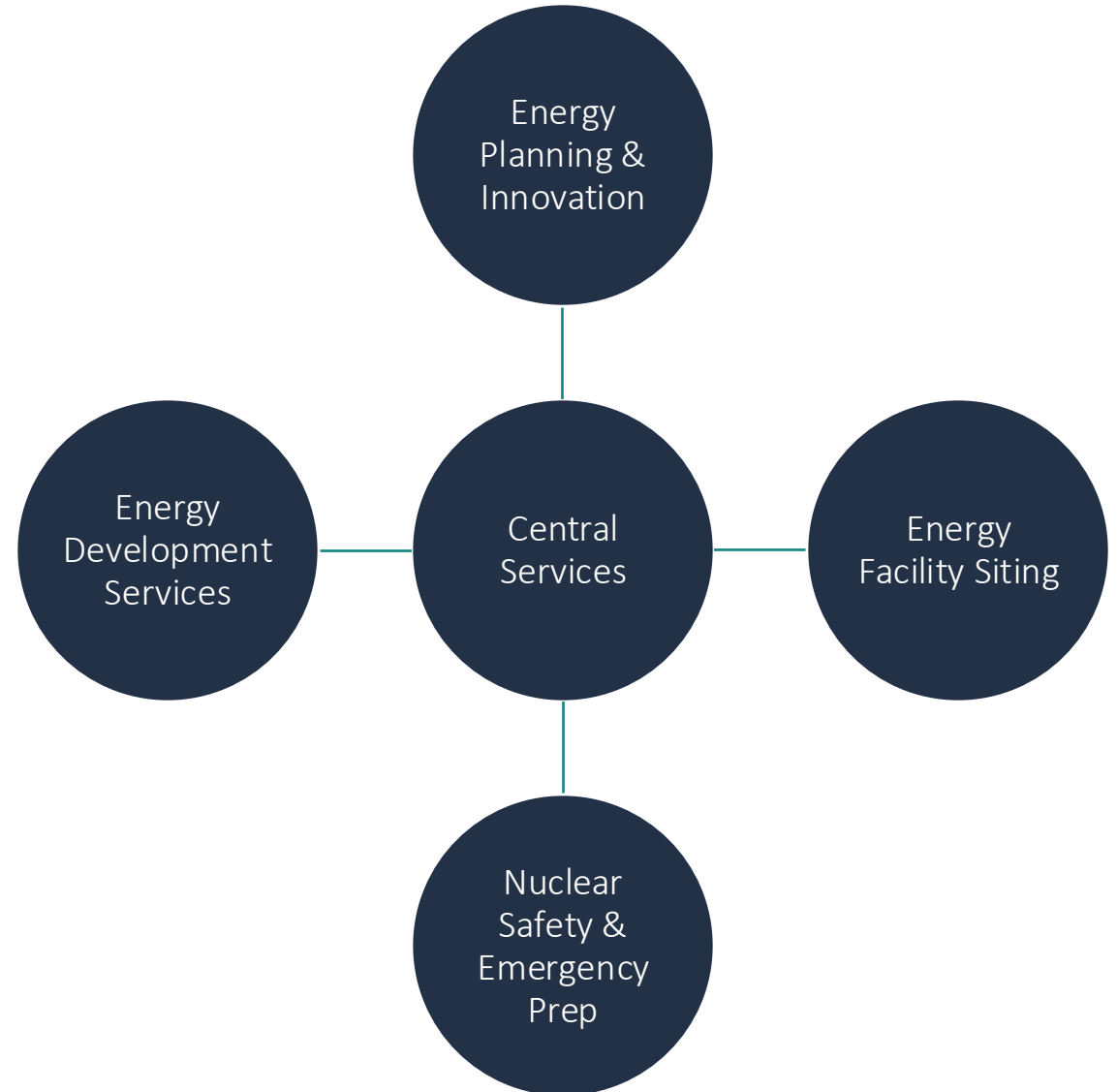
- Another bulleted list
- Calibri Light 24
- Remember to limit number of words per slide
- This text box looks best arranged with center aligning with center of blue box to right

Or you can lay it out this way.

# INCORPORATING A GRAPHIC

- This slide provides an example of how to incorporate a graphic into your layout
- Continue your bulleted list ...
- ... here

Sometimes, if you are just saying one thing, skip the bullets. Not everything needs to be bulleted.





# PRESENTING GROUPS OF INFO

This is a subheading that introduces the groups of information below. You can have up to four categories of information arranged on this slide.

## “Bucket” 1

- List of examples

## “Bucket” 2

- List of examples

## “Bucket” 3

- List of examples

## “Bucket” 4

- List of examples

# INCORPORATING PICTURES

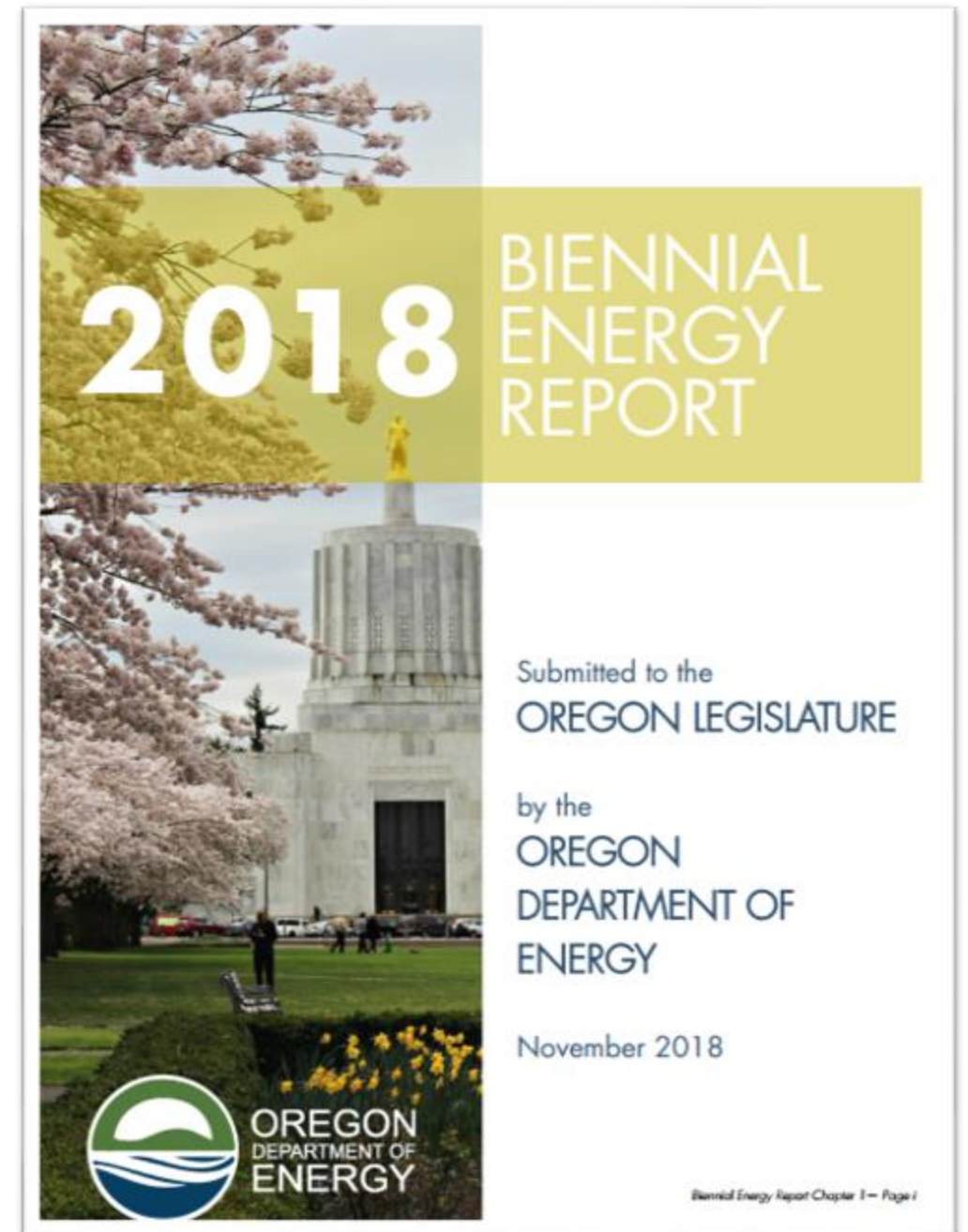
## Subhead in Calibri Bold

- Include pictures in your presentation. Resize as appropriate before inserting photos, otherwise your file size may be huge
- Here's one example of how to do that
- Remember to check your font: Calibri Light for your bulleted lists



# Another Photo Option

- Place the photo to the right
- Add information in a text box or list like this
- You can also include relevant links



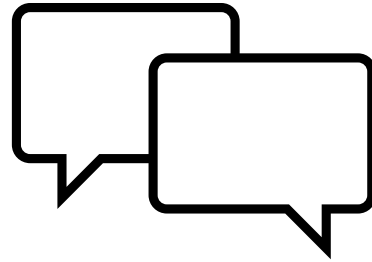


You can add information about what you're showing here. Not every slide needs to have our logo. If it's a busy slide, skip it!

Remember photos are available on the **Z Drive** under **Photos for Staff Use**.

# OPPORTUNITIES FOR PUBLIC COMMENT

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Provide written public comment

<https://odoe.powerappsportals.us/en-US/energy-strategy/>

# Thank You!

<https://www.oregon.gov/energy/Data-and-Reports/Pages/Energy-Strategy.aspx>