

# Policy and regulation supporting powerfuels in North America

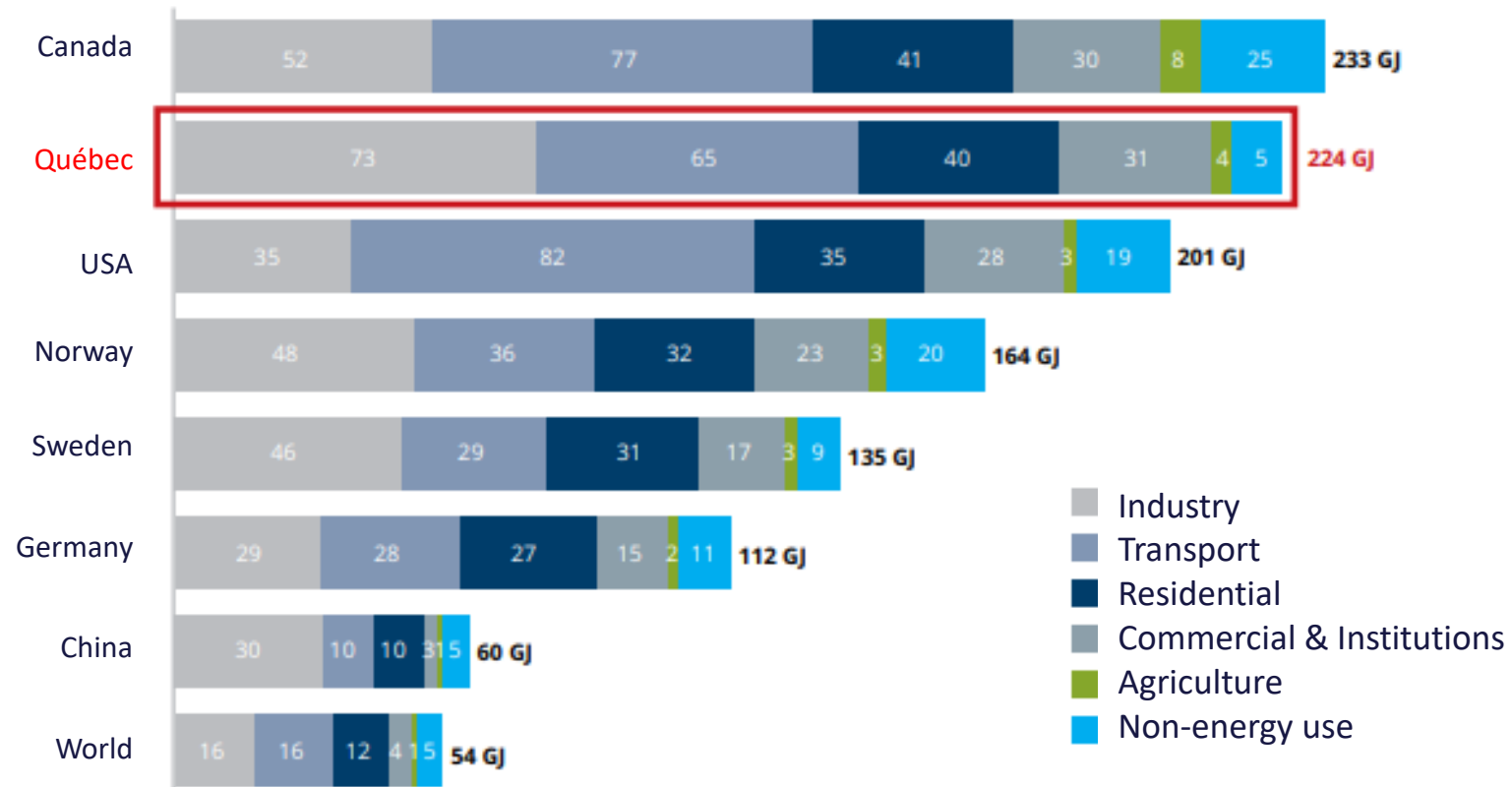
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naturelles

May 5th 2021

# Québec Energy Context

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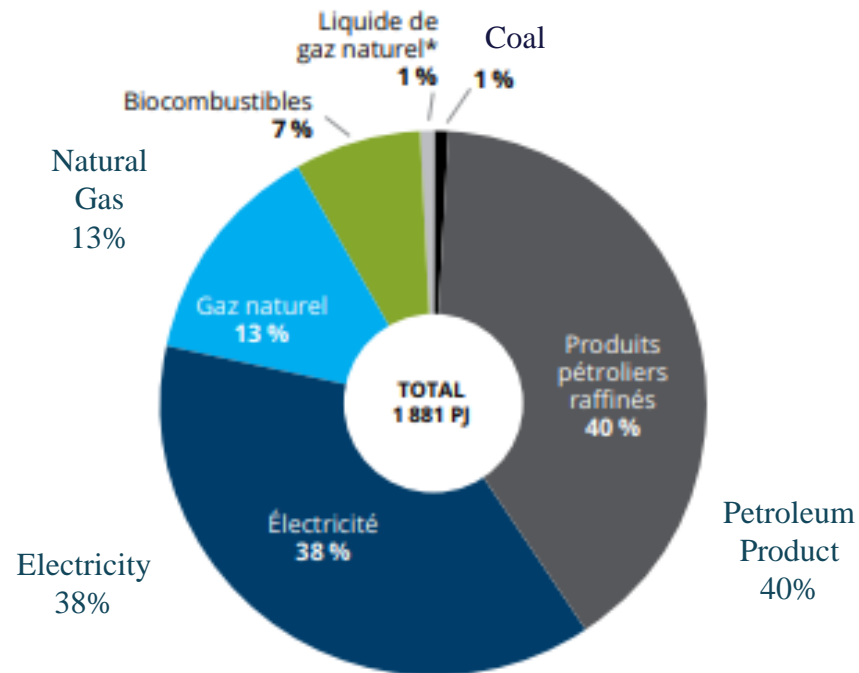
## Energy consumption per Québec inhabitant compared to others countries



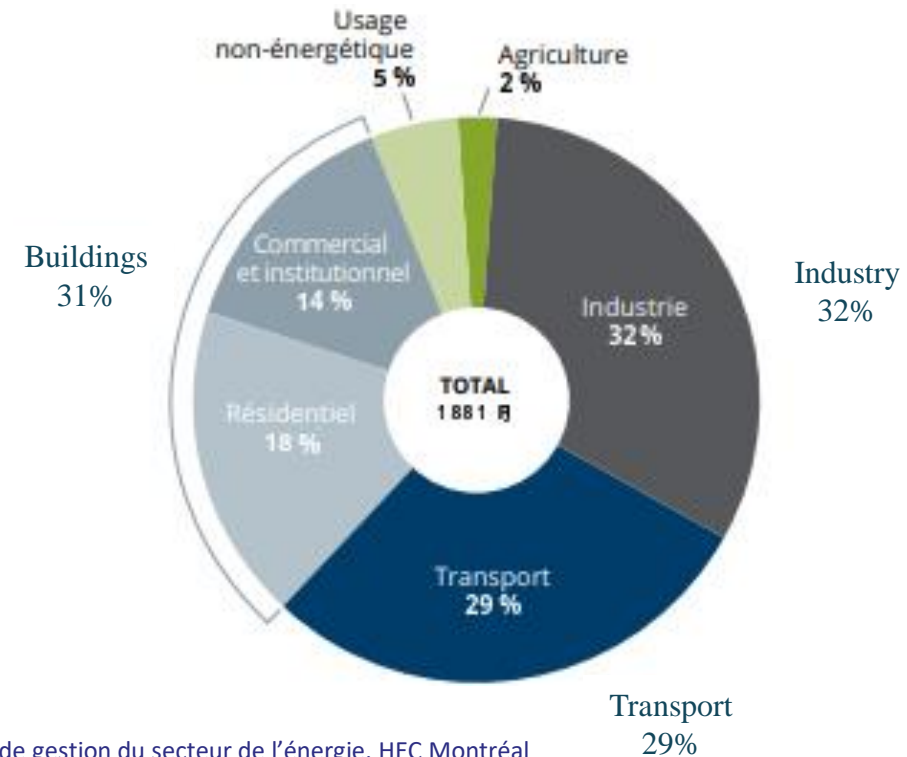
Reference: État de l'énergie 2021 au Québec Édition 2021, Chaire de gestion du secteur de l'énergie, HEC Montréal

# Québec Energy Context

Total energy consumption per energy form in Québec, 2018



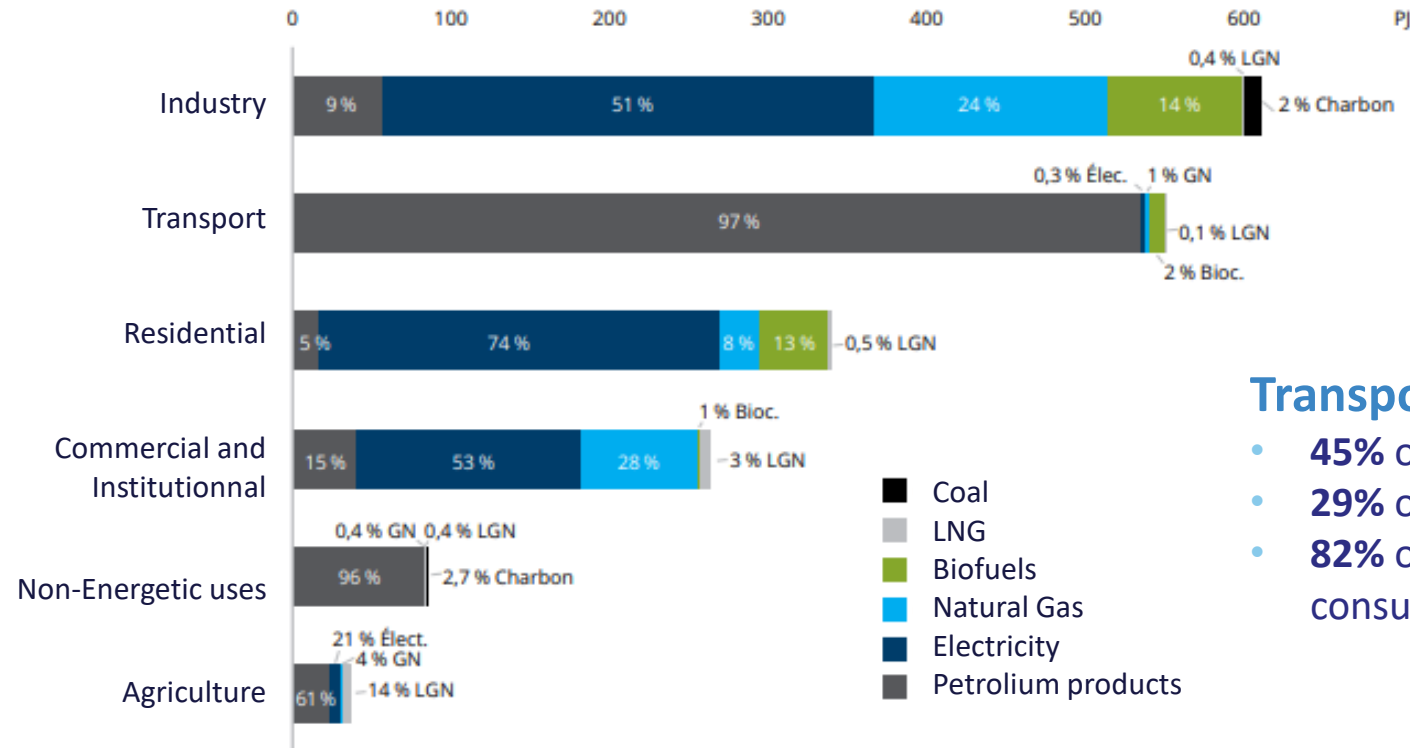
Total energy consumption per activity form in Québec, 2018



Reference: État de l'énergie 2021 au Québec Édition 2021, Chaire de gestion du secteur de l'énergie, HEC Montréal

# Québec Energy Context

## Consumption of different energy forms per activity sector in Québec, 2018



### Transport sector:

- **45%** of GHG emissions
- **29%** of total energy consumed in Québec
- **82%** of the total petroleum products consumed in Québec

Reference: État de l'énergie 2021 au Québec Édition 2021, Chaire de gestion du secteur de l'énergie, HEC Montréal

# Québec's strategy

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## 2030 Plan for a Green economy

We mean to succeed  
AND HAVE WHAT IT TAKES...

**\$6.7 BILLION**

in investments in the first five years

(4,5 billion euros)

... TO SUCCEED

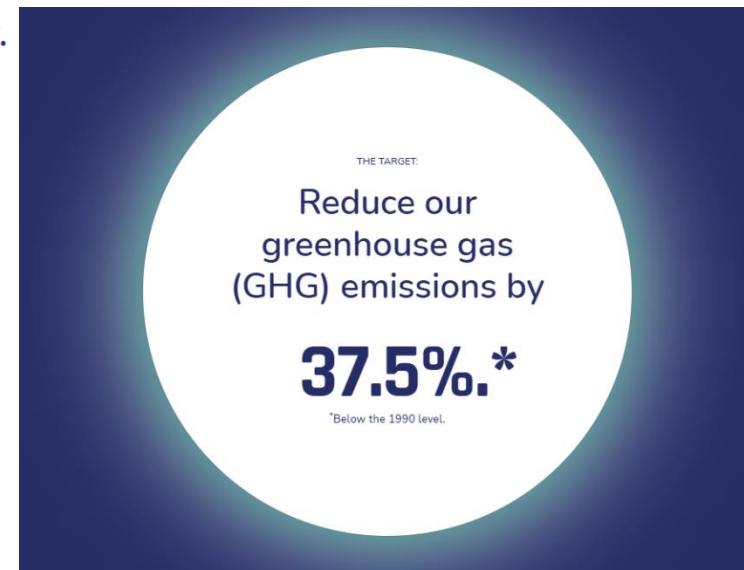
With the lowest GHG emissions per capita in North America, Québec is already leading the way. That should make us all proud.

Quebecers agree: We just can't wait any longer.

We know  
you're with us.  
Let's move forward together.

## Energy specific targets

- Reduce by **40%** the amount of petroleum products consumed
- Increase by **50%** bioenergy production
- Increase by **25%** overall renewable energy output
- Enhance energy efficiency by **15%**





# Quebec Energy Transition Sector – Who we are and what we do

Québec's  
energy  
transition **the future  
starts here**



Votre  
gouvernement

Votre  
gouvernement

## Our role in Québec's energy transition

**coordinate** the implementation of all the programs and measures required to meet the energy targets set out by the Government of Québec in the 2030 Energy Policy

**support, encourage, and promote** energy transition, innovation and efficiency

elaborate and implement **energy transition master plans**

### /general guidelines

- > Recognize energy efficiency as a priority energy source
- > Reduce Québec's dependence on petroleum products
- > Provide strong support for innovation in the energy sector
- > Develop the full potential of renewable energies
- > Support economic development
- > Strengthen the governance and accountability of the government

### /coaching service

Encourage greater participation in the energy transition:

- > Simplify programs and administrative procedures
- > Help customers better understand available programs and assist them with their projects

### /areas for action

- > Public, individual and freight transportation
- > Residential, commercial and institutional buildings
- > Industry
- > Bioenergy
- > Innovation
- > Off-grid power systems
- > Land use

### /financing

- > Fonds d'électrification et de changements climatiques
  - Derived from the carbon market, serves to finance GHG emission reduction measures
- > Contribution from utilities
  - Royalties from energy utilities, serve to finance energy efficiency measures
- > Other sources from financial partners

The Energy Transition  
Master Plan

15  
roadmaps  
225  
measures

+ more than  
**\$6  
billion in**  
investments

+ a  
collective  
effort  
by all actors

(4 billion euros)

Québec

# Québec's strategy

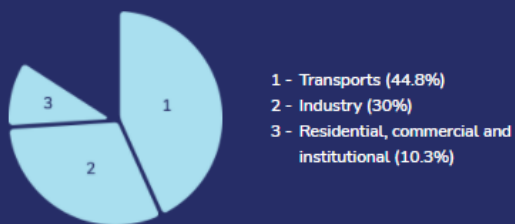
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## 1: ELECTRIFY

### Prioritizing electrification will reduce our greenhouse gas emissions

Québec has everything to gain by electrifying its economy to fight climate change. The Plan includes measures to electrify transportation, industry and buildings. Renewable energy will act in synergy with energy efficiency, also helping to reduce greenhouse gas emissions.

These were the main sectors responsible for greenhouse gas emissions in Québec in 2017:



## 2: INNOVATE

Build the economy of tomorrow.

## 3: ADAPT

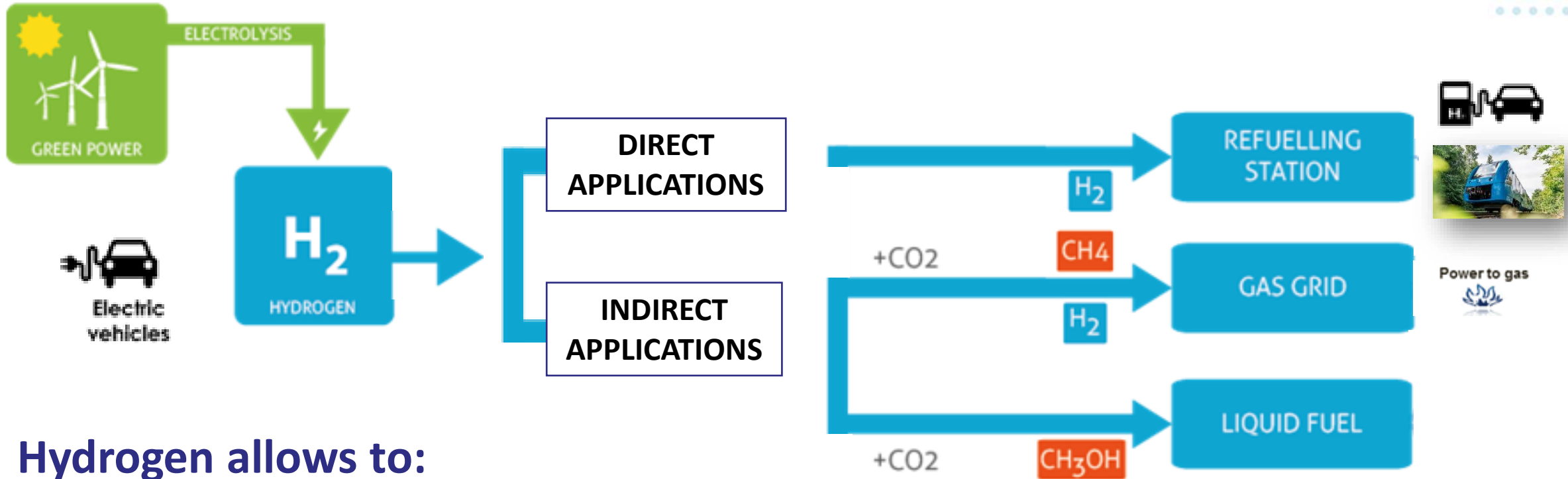
Boosting Québec's resiliency to climate change means prevention, not abstention.

## 4: WORK IN UNISON

Make the climate change transition a collective success.

# Hydrogen's potential in the energy transition

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## Hydrogen allows to:

- indirectly electrify what cannot be directly
- accelerate the energy transition process

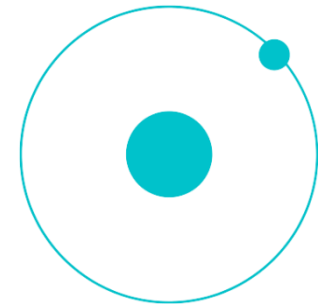


# Green hydrogen and bioenergy in Québec

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## Highlights of the upcoming Strategy

- Make Québec a leader in green hydrogen and bioenergy production.
- Reduce GHG emissions by converting imported fossil fuels in sector where direct electrification is difficult.
- Ensure complementarity of hydrogen and bioenergy in sectors hard to electrify: « the right energy form at the right place ».



# Renewable hydrogen based powerfuels in energy transition?

## Why?

- Climate change crisis and the goal to carboneutrality require to accelerate our energy transition
- Energy **efficiency** and **electrification** are **king** and **queen** but won't be sufficient to decarbonise our economy

## How?

- Multiply the **technological options** to replace fossil fuels by renewable energy
- Develop **decision tools** to determine the best use of energy forms
- Support **research and innovation** through financing and demonstration projects
- Support deployment of projects in harmony with **carbon price**



# Thank you