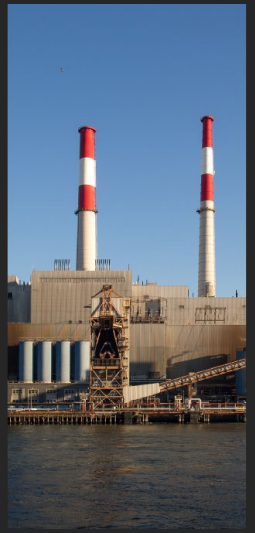
NOVO HYDROGEN

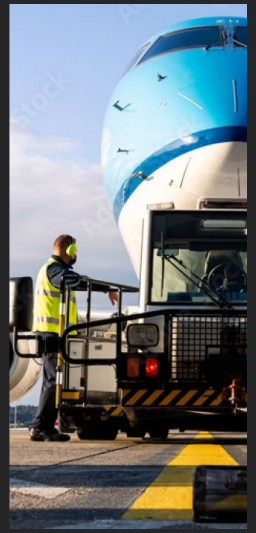
IECA Panel: GHG Reduction Options for Manufacturing

OUR MISSION

Reduce fuel price volatility and emissions with a reliable and safe zero-carbon alternative.

NovoHydrogen's mission is to accelerate the energy transition with a focus on the tough-to-decarbonize industrial, transportation, and power sectors. We are led by a conviction that green hydrogen is a key piece of the decarbonization puzzle. This drives our passion for our work.





NOVO TEAM EXPERIENCE

Execution

- 4GW+ of nameplate capacity by Novo's team while at previous blue-chip companies across multiple technologies
  - Utility scale wind, solar, and BESS
  - Transmission
  - Distributed solar and BESS
  - Commercial solar and BESS
  - Upstream and midstream oil & gas
- Global experience
  - North America, Latin America, Africa, China, Malaysia, Japan

Financing

- $5B+ financing raised for renewables projects
- Experience raising sponsor equity, tax equity, and debt
- Debt includes development, construction, and permanent

Safety & Standards

- Zero reported accidents on projects Novo's team managed
- In depth experience with UL/ISO/ASME/NFPA Standards
- Member of Center for Hydrogen Safety

DIMENSION RENEWABLE ENERGY
SunEdison
enel
Pattern
aes
GENERATE
FLEXGEN
dcp Midstream
UL
Shell
ExxonMobil

DECARBONIZATION POTENTIAL

- **Existing Hydrogen Replacement:**
  - Replacing fossil-based hydrogen with zero-carbon hydrogen
- **Existing Fossil Fuel Replacement:**
  - Blending with natural gas for process heat/steam or combustion
- **Backup Power:**
  - Turbines capable of handling 100% hydrogen, and a hydrogen – natural gas blend are in-use and available today
- **Fleet:**
  - Medium to Heavy Duty diesel fleet vehicles can be replaced with zero emission hydrogen-fueled vehicles
  - Other heavy duty transport including aviation, shipping, and train
- **24/7 renewable matched power**
  - Hydrogen can bridge the intermittency of renewable power from wind and solar
- **Zero-carbon Oxygen:**
  - A by-product of electrolysis and can be provided for any process needs

Fuel Hydrogen is Replacing	EPA Fuel Type	Avoided Emissions
Coal (Furnace)	Coal Mixed (Industrial Sector)	94.67 kg CO_2 per MMBtu
Diesel (Backup power, Vehicle fuel)	Distillate fuel oil No. 2	10.21 kg CO_2 per gallon
Natural Gas (Backup Power, Furnace, Boiler)	Natural gas	66.88 kg CO_2 per MMBtu
Fossil Hydrogen (refining, ammonia, annealing, combustion)	Natural gas	10+ kg CO_2 per kg-H_2 or 74+ kg CO_2 per MMBtu

TARGET CUSTOMER SEGMENTS

Industry

- Glass
- Metal
- Steel
- Semiconductor
- Refining
- Ammonia
- Cement
- Hydrogenated Oils

Power

- Power Turbines
- Data Centers
- Universities
- Corporate Campus
- Hospital
- Waste-Water Plants
- Mining

Transportation

- Fleet Owners
- Ports
- Mining
- Public Transportation

POLICY LANDSCAPE

NovoHydrogen is actively engaged in regulatory efforts to understand and guide the development of hydrogen policy, such as the IIJA and IRA

Infrastructure Investment and Jobs Act 2021

The Regional Clean Hydrogen Hubs program includes $8 billion; $7B for 7 hubs and $1B for demand-side support. Clean hydrogen hubs will create networks of hydrogen producers, consumers, and local infrastructure to accelerate the use of clean hydrogen

The Inflation Reduction Act 2022

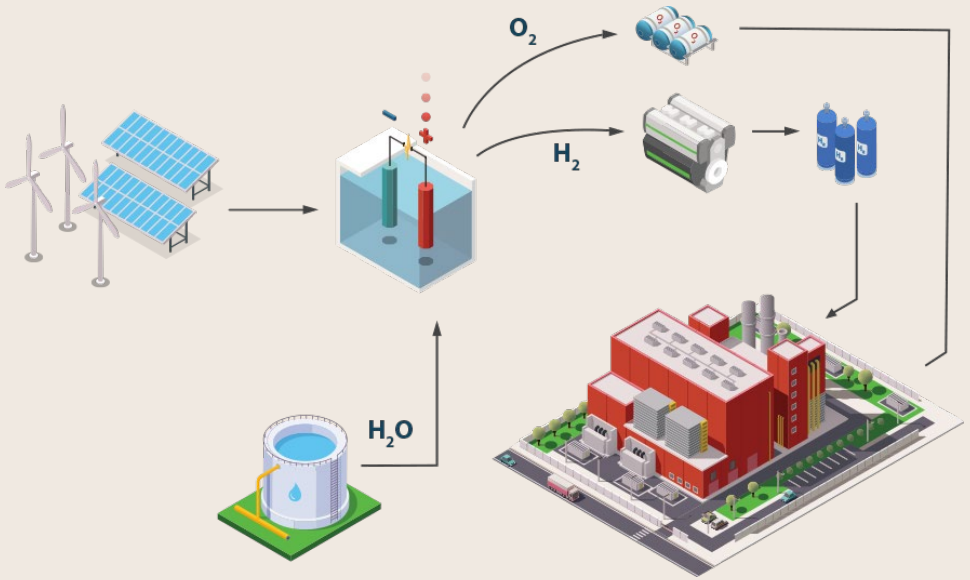
Carbon Intensity	Hydrogen Production Tax Credit
0 – 0.45 kg CO2e/kg H2	**$3.00 /kg H2**
0.45-1.5 kg CO2e/kg H2	$1.00
1.5-2.5 kg CO2e/kg H2	$0.75
2.5 – 4 kg CO2e/kg H2	$0.60

Hydrogen producers have the option of receiving either a credit equal to a specified fraction of their capital expenses (an investment tax credit) or a tax credit equal to a specified dollar value per kilogram of hydrogen produced (a production tax credit)

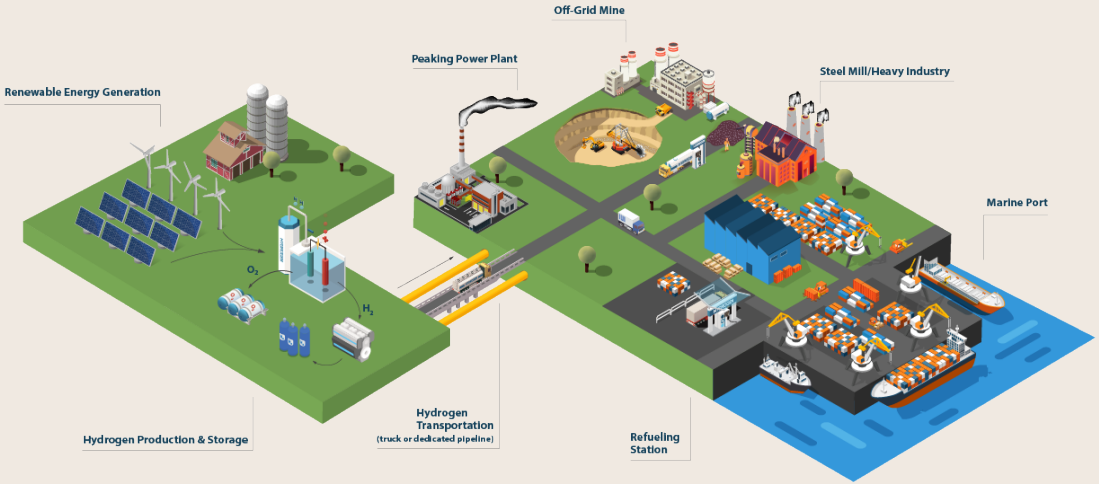
ON-SITE HYDROGEN & OXYGEN

Generate hydrogen where you need it with an on-site electrolyzer powered by renewable energy.

We work closely with top hydrogen equipment providers to bring the process of electrolysis to your facility. An on-site electrolyzer uses the electricity produced from solar or wind to split water into hydrogen and oxygen. The result is an emission-free, cost-effective decarbonized gas for use at your facility.



OFF-SITE HYDROGEN & OXYGEN



Leverage the scale of off-site decarbonized hydrogen generation and have it reliably delivered to your operations.

NovoHydrogen can reliably and safely transport decarbonized hydrogen using pipeline infrastructure or via trucks to your facility(ies). We leverage our network of large-scale hydrogen production facilities to tailor a solution that fits your needs. We handle the transportation logistics, allowing you to focus on your core operations. Ultimately you receive reliable, safe, and cost-effective decarbonized hydrogen.

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