

**Fuel Cells –
Diversify, Decarbonize, and Grow
Nevada**

JOINT INTERIM STANDING COMMITTEE ON GROWTH AND INFRASTRUCTURE

HyMAX Development Corporation
Dery Daye, Founder & President

Why me... What's HyMAX?

I have heard it said that
people of color
are not invested in climate change.

Climate Change

Climate change does and WILL continue to impact us all.
Unfortunately, the impacts of climate change are felt and experienced in vastly different ways
depending upon where you exist across the socio-economic spectrum.

Sometimes coincidentally.... Sometimes purposefully!

I founded HyMAX because addressing climate change seems to have been left to the
government, wealthy people, and big business.

People of color and **lower-income communities** are invested in climate change just like
everyone else. Unfortunately, we often have no way to “buy-in” to the climate change
discussion and have few personal opportunities to make a difference.

HyMAX is on a mission:

To create clean energy options for everyone,

To put a spotlight on “sacrifice zones” in our communities resulting from the legacy of structural
racism, and

To eliminate the economic blight of these zones.

Transportation Environmental Policy

The federal government and many states (including Nevada) have centered zero-emission transportation policies around battery-electric for passenger vehicles and hydrogen for the industrial sector (medium- and heavy-duty trucks).

Clean energy needs to benefit all

**Battery Electric Vehicles (BEVs)
could leave 40-80 million Americans
(and hundreds of thousands of Nevadans)
out of the clean energy future**

At-Home Charging

Multi-family Buildings with Chargers

- **At-home and accessible chargers**

Non-garage owners / Renters

Electricity insecure

- **42% of Nevadans rent**
- **?? Property owners unable to install chargers**

Public charging

- **Spotty and very limited**

Uneven application of incentives

IRS and state tax credits are unevenly used by higher income buyers!

Some communities do not take advantage of **cost savings** due to their living situation dictating EV charging options.

SAVINGS:

\$3,750-\$7,500 on new EVs

\$4,000 for used EVs

Fuel cells can promote energy equality

Fuel cells electrochemically generate electricity in the cell from hydrogen.

Fuel cell electric vehicle (FCEV) filling is simple and convenient.

FCEVs are lighter and more efficient than BEVs.

FCEVs will become cheaper than BEVs to purchase, fill, and operate.

Fuel cells offer gasoline stations/oil & gas distributors a pathway to clean energy.

Fuel cell power plants can generate electricity to augment the North American power grid system.

Fuel cell electric vehicle buyers can utilize IRS and/or state tax credits!

SAVINGS:

\$3,750-\$7,500 on new FCEVs

\$4,000 for used FCEVs

Toyota and Hyundai have complimentary FCEV H2 fueling programs:

purchase - \$15,000 or 6 years* complimentary fueling

lease - \$15,000 or 3 years* complimentary fueling

***whichever comes first**

Diversify & Decarbonize

California and Hawaii are the only states in the US where FCEV/hydrogen fueling is available.

Nevada should be next!

Proposal #1:

Commit the state's resources to fund 98 grants (10% of the state's current 987 gasoline stations) to partly pay for construction costs associated with siting, installing, and developing a hydrogen dispensing infrastructure at 98 existing gasoline station operations to be dispersed across the state.

Once stations are online and can sell hydrogen, local car dealers for the current FCEV manufacturers (Hyundai and Toyota) can begin selling FCEV vehicles in Nevada. BMW and Honda are also close to releasing their FCEVs to the market.

- By selling H₂ at gasoline stations, it can be **taxed** much the same as gasoline and would use existing collection systems.

Decarbonize

Photo of Shinincheon Bitdream Hydrogen Fuel Cell Power Plant,
Incheon, S. Korea

Courtesy: [Hydrogen-central.com](https://hydrogen-central.com)

Use fuel cells to improve reliability in Nevada's electric delivery system:

- **Create cost-effective, sustainable energy**
- **Reduce the reliance on natural gas to fuel current power plants**
- **Reduce the amount of fine dust in communities**

Grow

Nevada is not unique when it comes to clean energy opportunities.

But in terms of solar, what makes the Silver State perfect for generating GREEN HYDROGEN are available land and extensive sunny days (312 as measured at Harry Reid International Airport).

Employing solar photovoltaic arrays to power the electrochemical (electrolysis) process to convert water to hydrogen would allow Nevada the ability to grow our economy, provide high-paying jobs, and decrease energy costs.

Decarbonize & Grow

Proposal #2:

The 2023 State of the State Address by Gov. Lombardo outlined ENERGY INDEPENDENCE as critical for Nevada.

Empower the Nevada Clean Energy Fund (and other appropriate state agencies) as part of Article 4, Sec.39 of the NV Constitution to capitalize a developer to site, construct, permit, and operate:

- 1. A sufficiently sized solar farm capable of providing localized power and,**
- 2. At least a 150MW hydrogen fuel cell power plant facility to provide sustainable, clean energy power for distribution to Nevada's electric utility.**

This will allow PUCN and federal regulators time to craft appropriate guidance on allowing hydrogen fuel cell power plants to be used as regular generation schemes for connection to the North American power transmission grid.

Closing

The importance of an “all-of-the-above” approach toward building a lower-carbon future is vital.

This presentation provided a glimpse at how a diversified transportation and energy mixture that is firmly rooted in decarbonization not just electrification could grow Nevada and provide economic opportunities for its people.

Thank you

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