# CAPITAL

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### HYDROGEN PRODUCTION, COSTS, AND DISTRIBUTION PAGES 16-19

### CLEAN POWER CAPITAL CORP.

Clean Power is an investment company with a current focus in the health and renewable energy industries.

# WHY INVEST IN CLEAN POWER CAPITAL CORP

CLEAN POWER CAPITAL CORP. IS AN INVESTMENT COMPANY WHICH OWNS 90% OF POWERTAP, A COMPANY WITH EXPOSURE TO A KEY AREA OF EXCITING GROWTH IN THE USE OF HYDROGEN AS FUEL AS PART OF THE DECARBONIZATION OF THE GLOBAL ECONOMY. POWERTAP PLANS TO BUILD OUT A NETWORK OF MODULAR HYDROGEN REFUELING STATIONS BASED ON EXISTING IP AND PATENTS, PROVIDING LOW-COST RENEWABLE HYDROGEN. IT WILL UTILIZE CARBON CREDITS RECEIVED FROM THIS PROGRAM WHICH WILL PROVIDE A STREAM OF REVENUE FOR POWERTAP AND A RAPID PAYBACK ON ITS INVESTMENTS.

 Clean Power Capital Corp. is an investment company with a current focus in the health and renewable energy industries.
 Clean Power owns a 90% in PowerTap, its latest investment, which it purchased in October 2020. (SMR) for hydrogen production along with technology for carbon capture.

Hydrogen is in its infancy as a renewable fuel, but it's outlook is exciting with a role to play in a number of industries including transportation. Hydrogen is expected to be part of the climate change solution and McKinsey expects hydrogen will provide 18% of global energy by 2050. Investors are increasingly looking for opportunities related to hydrogen.

PowerTap is a supplier of hydrogen refueling stations. Its technology is proven, and it owns the intellectual property of the technology which consists of onsite modular dispensing units using steam methane reforming

• With tougher legislation and the need to combat climate change, auto manufacturers are now ramping up production of electric vehicles, most powered by batteries (BEVs), but the next step will be heavy duty electric vehicles (FCEVs). Due to cost and payload issues, batteries are unlikely to be used for electric trucks and the economics favour the use of fuel cells powered by hydrogen.

In the past year, there have

Overlap plans to become a leading player in the build out of cost-effective hydrogen refueling infrastructure. PowerTap plans to have one of the most advanced and smallest footprint SMR hydrogen production stations along with liquid storage for the trucking and automobile industry. The company has numerous US and international patents and is currently undertaking engineering and design for the third generation of PowerTap hydrogen filling stations.

been a number of announced agreements and joint ventures for the development of hydrogen powered fuel cell for heavy duty trucks from companies including Daimler, Volvo, Toyota, Hino, Kenworth, Hyundai, Nikola and General Motors. Some of these companies have already launched FCEV trucks with further launches in the next few years.

• Looking at the opportunities for hydrogen in transportation, and examining how hydrogen is produced, distributed, and the costs involved, it is clear that low-cost hydrogen refueling stations are the missing infrastructure needed to drive hydrogen fuel vehicle growth and where a significant investment opportunity exists. Importantly, PowerTap expects to sell its renewable natural gasbased hydrogen for US\$3.50/ kg, the lowest in North America. Furthermore, California carbon credits are an important incentive that will be a significant economic benefit to PowerTap in its hydrogen refueling station rollout plan.

The company anticipates the installation of 500 stations in its hydrogen network, initially in California, over the next 3-5 years. In January 2021, PowerTap signed an agreement with Andretti Group to install PowerTap's modular hydrogen fueling stations at existing gas stations starting in California in 2021.

 An installed PowerTap hydrogen station is anticipated to cost approximately US\$4.0 million per station, however 70% of the funding is expected to come from Green Loans.

Furthermore, PowerTap plans to participate in the California Low Carbon Fuel Standard (LCFS) Carbon Credit program. Carbon credits received from this program will provide a stream of revenue for PowerTap and a rapid payback on its investments. • An investment in Clean Power and Powerap gives exposure to the dynamic and currently under appreciated growth in hydrogen as a fuel. PowerTap has unique intellectual property and cost structure to build out a renewable hydrogen refueling station infrastructure, while at the same time benefiting from Green Loans and significant carbon credits which will finance the required capex as well as providing early revenue flow.

The LCFS credits will be issued simply if the hydrogen capacity is installed, even if no hydrogen is dispensed. PowerTap has calculated that a minimum of US\$1.3 million can be generated from trading in emissions certificates per station, per year, even without generating revenues from the sale of

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# Hydrogen is in its infancy as a renewable fuel, but it's outlook is exciting with a role to play in a number of industries

including transportation. Auto manufacturers are now ramping up production of electric vehicles, most powered by batteries, but the next step will be heavy duty electric vehicles. Due to cost and payload issues, batteries are unlikely to be used for electric trucks and the economics favour the use of fuel cells powered by hydrogen. Investors are increasingly looking for opportunities related to hydrogen.

In recent years, governments and companies have started to rise to

Hydrogen is expected to be part of the climate change solution and McKinsey expects hydrogen will provide 18% of global energy by 2050.

the challenge of climate change. A key step in combating climate change is the decarbonising of electricity production. This involves increasing the amount of renewable energy (wind, solar, batteries and other renewable sources of energy) and reducing the amount of energy from fossil fuels.

Hydrogen is expected to be part of the climate change solution and McKinsey expects hydrogen will provide 18% of global energy by 2050.

Mobility as a whole contributes around 17% to the global CO<sub>2</sub> footprint. As a consequence, driven by legislation from governments, transportation is undergoing a major transformation which essentially entails a switch from the internal combustion engine (ICE) to electric vehicles (EVs). At present most major automakers are in the early stages of making the transition from gas and diesel vehicles to EVs.

The primary energy source being developed for electric cars is electricity from battery packs, used for battery-electric vehicles (BEVs). However, automakers are also developing vehicles powered with a fuel cell, known as fuel cell electric vehicles (FCEVs). FCEVs produce electricity using a fuel cell powered by hydrogen, rather than drawing electricity from a

than drawing electricity from a battery, and are seen as another key technology for enabling CO2-neutral transportation in the future.

# HYDROGEN AS A TRANSPOR-TATION FUEL

Although hydrogen is in its infancy as a fuel source, its future is incredibly bright. The fuel cell is not yet established in the mobility sector, but this has mainly been due to the fact that oil (gas and diesel) has always been a cheaper, high density source of energy. However, the requirement for CO<sub>2</sub>-neutral mobility makes an alternative to oil necessary, and hydrogen is another energy source with a high energy density but does not contain carbon. In addition, it is expected that hydrogen can eventually be sold at the filling station at a similar price level to diesel.

The Hydrogen Council, an industry focused organisation, believes that hydrogen is a central pillar of the energy transformation required to limit global warming. It envisages hydrogen powering more than 400 million cars, 15 to 20 million trucks, and around 5 million buses in 2050, which constitute on average 20 to 25% of their respective transportation segments. Since hydrogen plays a stronger role in heavier and longrange segments, these 20% of the total fleet could contribute more than one-third of the total CO2 abatement required for the road transportation sector

> Hydrogen powering more than 400 million cars, 15 to 20 million trucks, and around 5 million buses in 2050



THE ADOPTION OF FCEVS IS INITIALLY EXPECTED TO HAVE HIGHER PENETRATIONS IN HEAVY-DUTY VEHICLES, TRUCKS, BUSES, AND VANS. THIS IS BECAUSE LARGER VEHICLES REQUIRE LARGER AND MORE EXPENSIVE BATTERIES WHICH NEGATIVELY IMPACT PAYLOADS. FUEL CELL TRUCKS ARE REGARDED AS AN ECONOMICAL, EMISSION-FREE ALTERNATIVE THAT PERMITS LARGE PAYLOADS AS WELL AS HAVING SIGNIFICANT RANGES

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### AND FAST REFUELING CYCLES.

Furthermore, the combination of tougher legislation on the use of diesel transport in many regions, government incentives, and advances in fuel cell technology are now making FCEVs a viable transport alternative. Truck haulage companies, including FedEx and UPS, are also investing in fuel cell truck technology in order to reduce their carbon footprint.

# TOUGHER LEGISLATION FOR DIESELS

IN NORTH AMERICA, THE ENVIRONMENTAL **PROTECTION AGENCY (EPA) IS IDENTIFYING TECHNOLOGIES CAPABLE OF REDUCING CRITERIA POLLUTANT EMISSIONS FROM HEAVY-DUTY TRUCKS. IT FOCUSES ON PARTICULAR MATTER** AND NITROUS OXIDE (NOX) **EMISSIONS. NEW TOUGHER US EMISSIONS PROPOSALS ARE EXPECTED TO BE ISSUED** THIS YEAR FROM THE EPA AND CALIFORNIA AIR RESOURCES **BOARD (CARB), FOLLOWED BY EVEN STRICTER STANDARDS** FOR 2024 AND 2027, WHICH WILL REQUIRE COMMERCIAL **TRUCK MANUFACTURERS TO INCLUDE AT LEAST SOME ZERO** EMISSION MODELS BY 2024. THESE ARE AN IMPORTANT FACTOR IN DRIVING TRUCK

draw their energy from fuel cells. In Japan and South Korea, manufacturers have partnered with their governments to heavily invest in an expansion of fuel cell technology for passenger vehicles and goods transportation.

MANUFACTURERS TO LOOK AT ALTERNATIVE TECHNOLOGY SOLUTIONS.

The European Union has agreed to implement stricter emission limits for heavy buses and trucks. In China, thousands of e-buses already

# FUEL CELL SYSTEM FOR HEAVY-DUTY TRUCK

HYDROGEN-POWERED VEHICLES ARE COMMERCIALLY AVAILABLE NOW BUT ARE Multiple initiatives are moving forward and beyond 2030, hydrogen is expected to increasingly be used to create renewable synthetic fuels to decarbonize commercial aviation and freight shipping.

EXPECTED TO BECOME INCREASINGLY AVAILABLE OVER THE NEXT FEW YEARS, PARTICULARLY FOR TRUCKS, BUSES, VANS, TRAINS, AND FORKLIFTS.





Battery Packs

# HEAVY DUTY TRUCK DEVEL-OPMENTS

THE ANALYSIS OF FUEL CELL TRUCKS BY THE HYDROGEN COUNCIL SUGGESTS THAT THIS TECHNOLOGY IS THE LOWEST-COST WAY TO DECARBONISE BOTH THE MEDIUM- AND HEAVY-DUTY SEGMENTS OF THE TRANSPORTATION SECTOR.

fuel-cells in about three years and to be in series production during the second half of this decade. Daimler Trucks is pursuing similar vehicle schedules for the North American, Japanese and European markets. In September 2020, Daimler presented a hydrogen fuel cell concept truck called the Mercedes-Benz GenH2 Truck. The aim is to build heavy duty trucks that can perform flexible and demanding long-distance haulage operations with ranges of up to 1,000 km (620 miles) and more on a single tank of hydrogen. Daimler truck lines include the Freightliner and Western Star brands in North America.

In November 2020, Daimler Truck and Volvo, the two of the world's largest makers of heavy-duty trucks, announced an agreement for a joint venture to develop, produce and commercialize fuel-cell systems for use in heavy-duty trucks. Volvo will purchase a 50% stake in Daimler's existing fuelcell business for about €600 million (US\$652 million). Both companies' goal is to start with customer tests of trucks with

# DAIMER BENZEBS BENZEBNE

### IN OCTOBER 2020, TOYOTA

cycle. The debut vehicle is the first of 10 that are planned for freight duties in and around the ports of Los Angeles and Long Beach in California. In July 2020, Hyundai Motor, the Korean automaker, announced it had delivered the first ten units of its new hydrogen-powered heavy-duty truck, the XCIENT Fuel Cell, to customers in Switzerland. Hyundai states that this is the world's first mass-produced fuel cell heavy-duty truck. Hyundai intends to roll out 50 trucks this year and a total of 1,600 units by 2025. The driving range for XCIENT Fuel Cell is about 400 km on a single refuelling, although it is developing a longdistance tractor unit capable of traveling 1,000 km. It is aimed at global markets including North America and Europe

ANNOUNCED A JOINT VENTURE WITH TRUCK MAKER HINO USA TO JOINTLY DEVELOP A CLASS 8 HYDROGEN FUEL CELL TRUCK FOR THE NORTH AMERICAN MARKET. THE COMPANIES WILL COMBINE THE NEWLY DEVELOPED HINO XL SERIES CHASSIS WITH TOYOTA'S PROVEN FUEL CELL TECHNOLOGY. THE FIRST DEMONSTRATION VEHICLE IS EXPECTED TO ARRIVE IN THE FIRST HALF OF 2021.

In April 2019, Toyota announced

a separate collaboration with Kenworth Truck to develop heavy-duty hydrogen trucks for North America. The new truck provides better packaging and an estimated driving range of more than 300 miles on a tank of fuel – double that of typical drayage trucks on the average daily duty

# TOYOTA & HINO CLASS 8 FUEL CELL BLECTRIC TRUCK

Possibly the highest profile

hydrogen fuel-cell powered trucks by the end of 2021, with testing for the beta prototypes expected to begin in the first half of 2022. Nikola's business partners and investors include truck maker Iveco, Bosch, Hanwha Group, Wabco and NEL Hydrogen. Nikola reportedly has a US\$14 billion backlog of hydrogen truck orders.

North American truck producer developing hydrogen-electric vehicles, is Phoenix-based Nikola. In November 2020, Nikola announced the signing of a non-binding Memorandum of Understanding with General Motors for a global supply agreement related to the integration of GM's Hydrotec fuel-cell system into Nikola's commercial semi-trucks. Nikola and GM will work together to integrate GM's Hydrotec fuel-cell technology into Nikola's Class 7 and Class 8 zero-emission semi-trucks for the medium- and long-haul trucking sectors. As previously announced, Nikola expects to begin testing productionengineered prototypes of its

Bus manufacturers are also trialing buses fueled by hydrogen and fuel cells. These include bus makers, Solaris, Van Hool and VDL.

# LONG HAUL TRUCK (CLASS 8) FUEL COMPARISON

### EILEL TVDE

Driving Range

**Fueling Time** 

Cost/Mile

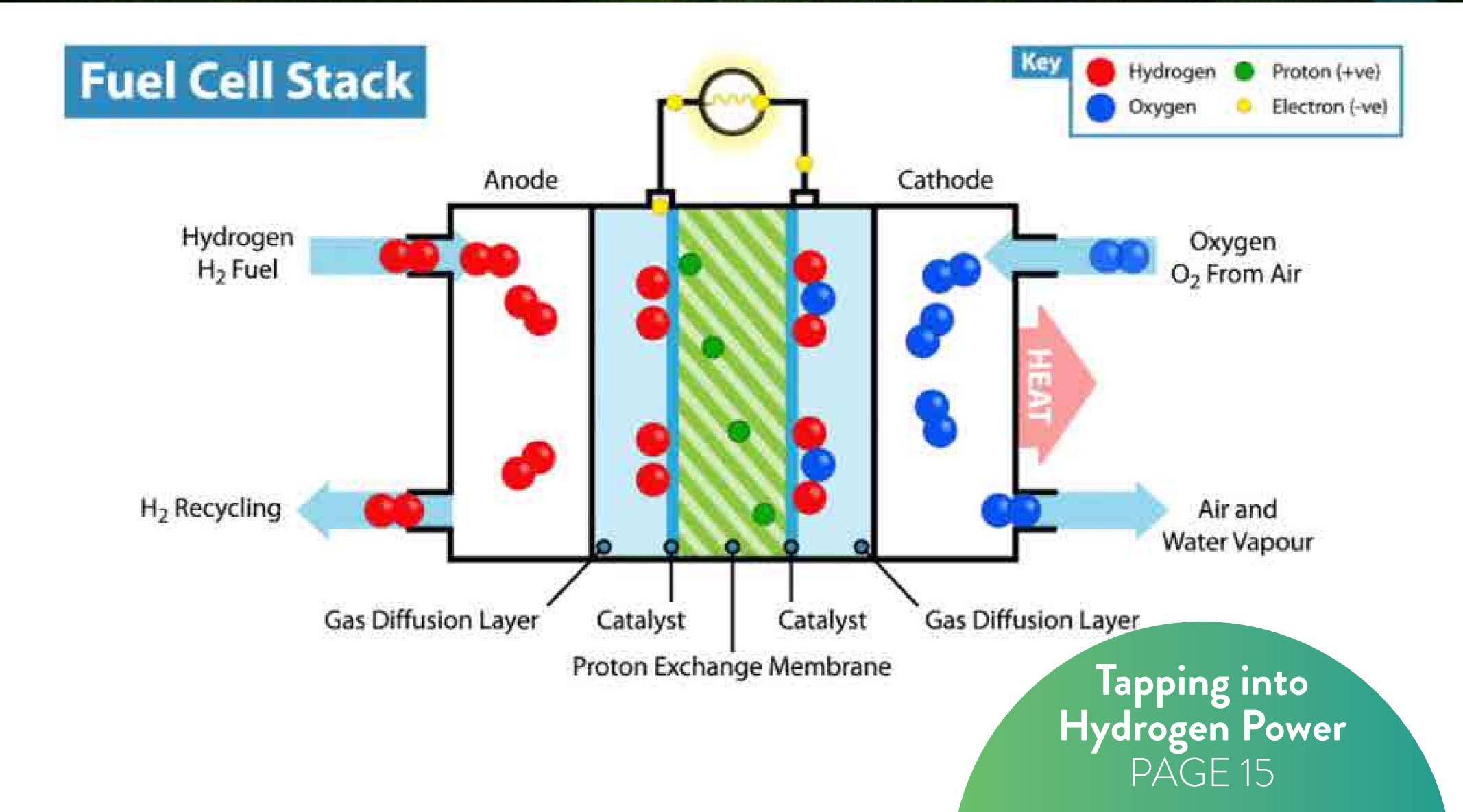
FUEL TYPE1	(Miles)	(Min)	(cents)
CNG	370	15-30	36.78
Diesel	812	15-30	33.44
Battery Electric <sub>2</sub>	400	480	37.5
Hydrogen	900	15-30	15

Source: PowerTap. (1) All fuel costs exclude incentives. (2) No battery electric long-haul trucks expected Source: Power Tap presentation

# WHAT IS FUELCELL

A fuel cell is like a battery in that it generates electricity from an electrochemical reaction. Fuel cells are electrochemical devices that produce electricity and heat from a fuel (often hydrogen) and oxygen. Unlike cleaner and more efficient. Fuel cells generate electricity by an electrochemical reaction in which oxygen and a hydrogenrich fuel combine to form water. Unlike internal combustion engines, the fuel is not

conventional engines, they do this without burning the fuel and are therefore generally combusted, the energy instead is released electrocatalytically.



# HYDROGEN PRODUCTION, COSTS, AND DISTRIBUTION

In order to understand the opportunities for hydrogen in transportation, it is worth examining how hydrogen is produced and distributed, and to look at the costs involved. Importantly, low-cost hydrogen refueling stations are the missing infrastructure needed to drive hydrogen fuel vehicle growth and where a significant investment opportunity exist by applying electricity (alkaline technology) but can also be carried out using proton-exchange membrane (PEM) technology which uses a solid membrane to separate the hydrogen from water molecules via an electric charge. For producing low-carbon hydrogen from natural gas with a carbon capture system, two technology options exist: steam methane reforming (SMR) and autothermal reforming (ATR). SMR combines natural gas and pressurised steam to produce syngas, which is a blend of carbon monoxide and hydrogen. The majority of the CO2 is then captured and separated from the hydrogen. ATR combines oxygen and natural gas to produce syngas and is typically used for larger plants compared with SMR technology.

Producing Hydrogen Most hydrogen today is produced from fossil fuels and emits carbon (grey hydrogen). However, there are numerous options for producing low-carbon and renewable hydrogen. The two main routes are through electrolysis using renewable power as an input (green hydrogen) or reforming natural gas and capturing the emitted carbon (blue hydrogen). Electrolysis generally involves using a saline solution to separate hydrogen from water molecules

The Cost of Hydrogen Grey hydrogen, the most competitive option today, derived from steam reforming of natural gas and producing 9-12 tonnes of CO2 for every tonne of H2 produced, currently costs an average of about US\$1.50/kg, excluding a price on the carbon emitted in its production. More than 60% of US electricity is currently generated from fossil fuels, but grey hydrogen is expected to be fully phased out by 2050.

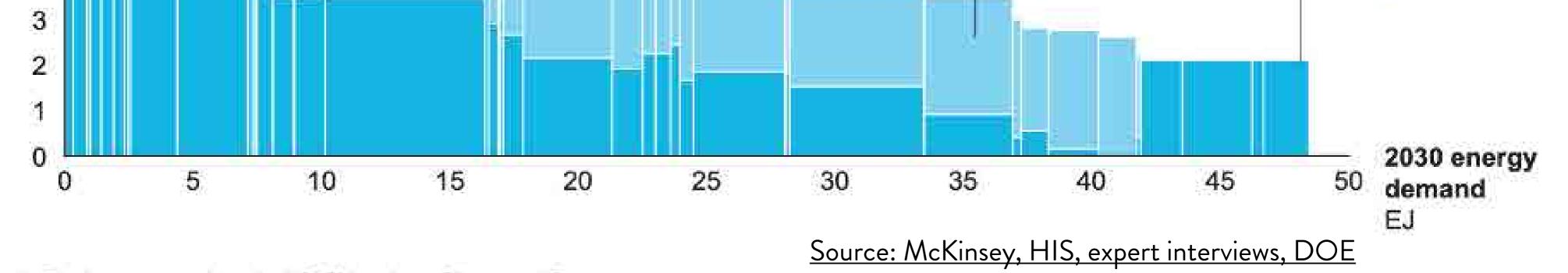
applications. The Hydrogen Council believes that the cost of producing clean hydrogen should drop by up to 60% over the coming decade, with the optimal production option highly dependent on the region. It believes that lowcarbon hydrogen from natural gas has the potential to enter the market with costs of around US\$2.60/kg by 2030, only about 10-20% higher than those of conventional grey hydrogen, providing low-carbon hydrogen at scale.

The Hydrogen Council calculates that green hydrogen can meet a large share of the mobility energy demand by 2030. Grid supplied green hydrogen produced by electrolysis can be produced currently as low as US\$6.06/kg in the US and US\$4.80/kg in Europe according to The International Council on Clean Transportation (ICCT)[2]. However, in 2020 median costs were US\$8.81/ kg in the US and US\$13.11/kg in Europe.

Nevertheless, the cost of hydrogen varies significantly across regions and depends heavily on the method of production and the availability and price of energy inputs. For example, where natural gas is cheap and CO2 storage is available, such as in North America, reforming with carbon capture offers a low-cost, atscale source of production. For renewable hydrogen from electrolysis, the crucial factor is access to low-cost renewables. Newer carbon capture technologies make renewable natural gas-based reformed hydrogen a greener solution in North America than electrolysis.

Achieving cost-competitive green hydrogen by 2030 will require economies of scale but reducing hydrogen production costs will play a disproportionate role in unlocking the cost competitiveness of all hydrogen

Hydrogen powering more than 400 million cars, 15 to 20 million trucks and around 5	2		
million buses i         2050         12         11         10		Small passenger vehicles have a production cost disadvantage compared to BEV and therefore do not break even	<ul> <li>Distribution<sup>2</sup></li> <li>Production</li> <li>LCVs for urban delivery require low hydrogen costs in regions with low electricity prices</li> </ul>
9 8 7 6 5 4			6 USD/kg



Regions assessed are the US, China, Japan/Korea, and Europe
 No distribution costs for aviation as it can be distributed as liquid fuel

The ICCT is slightly less optimistic and believes that the median price of grid supplied renewable hydrogen in the US will decrease by 35% from US\$8.81/kg in 2020 to US\$5.77/kg in 2050; and during that same timeframe the minimum price will decrease by 32% from US\$6.06/kg to US\$4.15/kg. The median price of hydrogen in Europe is expected to decrease by 41% from US\$13.11/kg in 2020 to US\$7.69/kg in 2050; and during that same timeframe the minimum price will decrease by 34% from US\$4.83/kg to

With hydrogen costs at the pump of US\$6.00/kg (including production, distribution, and retail) hydrogen fuel can meet about 15% of transport energy demand cost competitively by 2030. With costs at US\$4.00/ kg at the nozzle, hydrogen could even meet more than 50% of the mobility sector's energy demand. Trucks, long-distance buses and large passenger vehicles are particularly competitive, as the cost of batteries required to secure the necessary range is very high for the battery alternatives.

Distributing Hydrogen Hydrogen refueling stations are the missing infrastructure needed to drive hydrogen fuel vehicle growth. The development of hydrogen infrastructure is a key requirement for the widespread uptake of FCEVs. Globally, there are only 432 hydrogen refueling stations, half of which are in Japan and the US, and in 2019 just 89 hydrogen refueling stations went into operation worldwide. Hydrogen refueling at publicly accessible stations along main transport outes will become increasingly important.

In December 2020, Canada announced the goal of carbon neutrality by 2050 as part of the global fight against climate change and that it expects up to 30% of Canada's energy to be hydrogen-based with plans to build a national hydrogen refueling station network. In January 2021, California Governor Newsom proposed US\$1.5 billion for companies to invest in the construction and maintenance of charging and hydrogen refueling infrastructure as part of a US\$4.5 billion stimulus proposal for the 2021 state budget.

A significant increase in the construction of new networks of hydrogen refueling stations will be necessary to meet this expectation of FCEVs on the road. Hydrogen refueling at publicly accessible stations along main transport routes will become increasingly important. The Hydrogen Council expects hydrogen refueling stations will exceed 10,000 by the end of the decade and expects US\$30 billion of hydrogen infrastructure to be invested globally on hydrogen refueling and transportation infrastructure.

The construction of hydrogen refueling stations are being planned by some of the FCEV heavy duty truck manufacturers and fuel cell producers as part of their offering to customers, but it will also require third parties to participate in the infrastructure build out. Tapping into Hydrogen Power PAGE 19

# THE POWERTAP SOLUTION

PowerTap is a supplier of hydrogen refueling stations. Its technology is proven, and it owns the intellectual property of the technology which consists of onsite modular dispensing units using steam methane reforming (SMR) for hydrogen production along with technology for carbon capture. PowerTap plans to become a leading player in the build out of costeffective hydrogen refueling infrastructure. It anticipates the installation of 500 stations in its hydrogen network, initially in California. In addition, PowerTap expects to sell its renewable natural gas-based hydrogen for US\$3.50/kg, the lowest in North America. Furthermore, California carbon credits are an important incentive that will be a significant economic benefit to PowerTap in its hydrogen

has already been installed in 14 hydrogen stations in California under previous ownership, but no longer owned. PowerTap now owns the technology and intellectual property of the hydrogen refueling stations with over US\$50 million having been previously invested in developing the technology. The company has numerous US and international patents.

In November 2020, PowerTap announced a partnership with Cryotek to provide engineering and design for the third generation of PowerTap hydrogen filling stations. These are planned to be deployed across North America starting in 2021. PowerTap believes that its new modular design of the units has distinct advantages over the previous two generations of PowerTap units and other hydrogen refueling technologies. These SMR units will be capable of producing 1,200 kg/day along with gaseous and liquid hydrogen storage solutions capable of 1,000 kg or more per day.

### refueling station rollout plan.

### PowerTap Technology PowerTap plans to have one of the most advanced and smallest footprint SMR hydrogen production stations along with liquid storage for the trucking and automobile industry. PowerTap technology



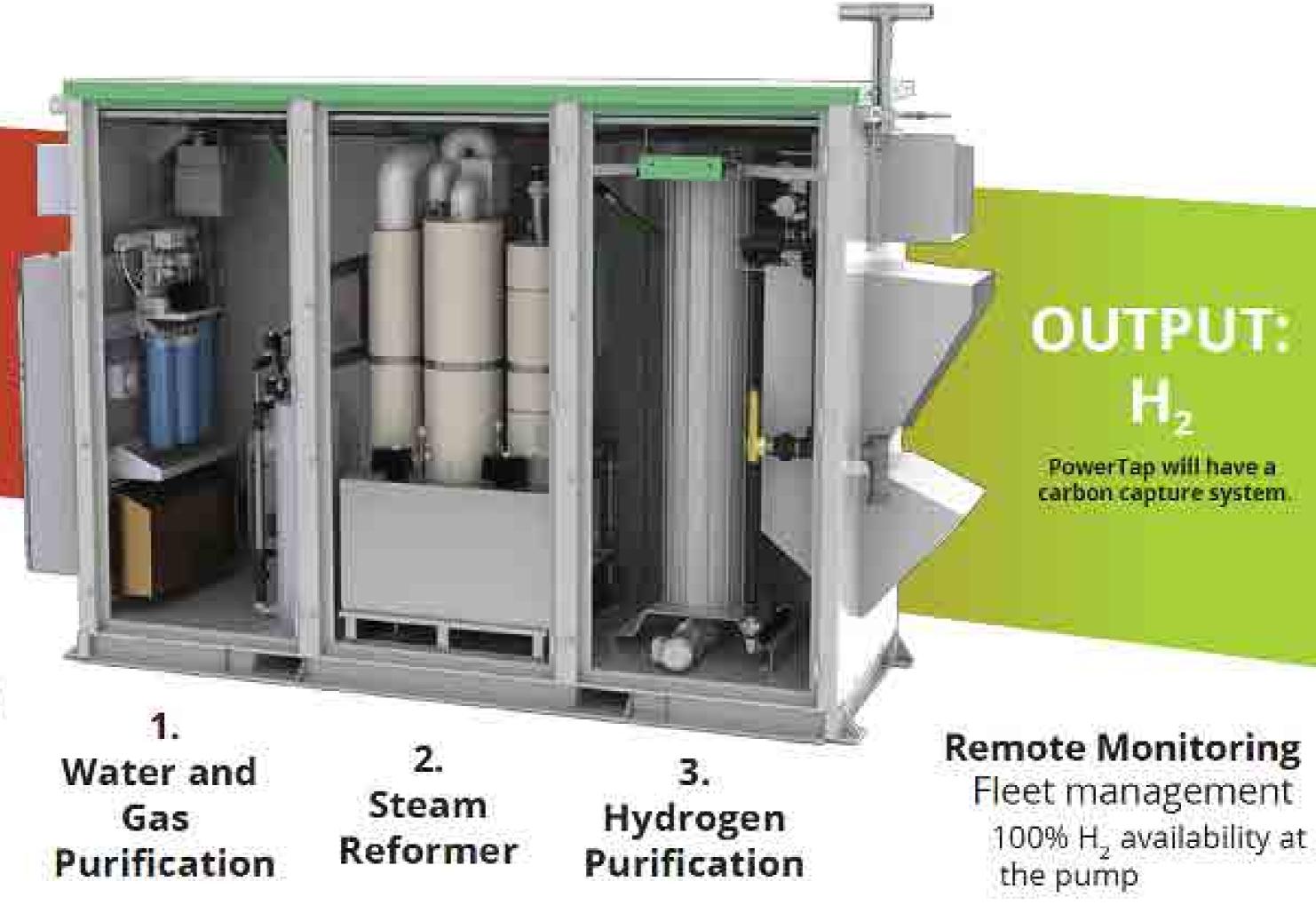
 Renewable Natural gas
 Electricity (minor)
 Water

### **Robust Reformer**

Temperature cycling (increased durability)

**Compact Purifier** 

Small footprint (easy installation)



Powerlap's hydrogen delivery cost is expected to be US\$3.50/ kg, the lowest in North America. Most existing North American hydrogen filling stations must have their hydrogen delivered at a much higher cost than PowerTap's on-site hydrogen production cost. As shown previously, the median price of grid supplied renewable hydrogen in the US in 2020 was US\$8.81/kg according to ICCT. Furthermore, onsite SMRs reduce emissions by approximately 33% against delivered hydrogen according to Argonne National Laboratory.

use. The hydrogen is purified and passes through a carbon capture system, designed to eliminate the release of CO2.

Powerlap utilizes a unique carbon capture process that creates a chemical reaction that not only disposes of the CO2 but in the process creates clean renewable electricity that can be fed back into the local electric grid or used to create a unique renewable micro grid for local power distribution. This solution has never been available in a small-scale hydrogen production solution and will be the first deployed in support of PowerTap's modular hydrogen refueling stations in North America.

The inputs of the PowerTap onsite SMR are renewable natural gas, electricity, and water with the result that hydrogen is produced directly at the point of

**The PowerTap business Model.** PowerTap anticipates that the installation of its station network, initially in California, will consist of up to 500 refueling stations, to be located at existing gas stations and truck stops and installed over the next 3-5 years. An installed PowerTap hydrogen station is anticipated to cost approximately US\$4.0 million per station.

This will be subject to obtaining zoning approval for refueling station activity from the applicable municipal authority, but it is expected that by colocating the modular stations at existing gas stations and truck stops, the existing operators will have current zoning permits, on which PowerTap will be able to rely.



In January 2021, PowerTap signed an agreement with Andretti Group to install PowerTap's modular hydrogen fueling stations at existing gas stations starting in California in 2021. The Andretti Group has over 100 company-owned and operated facilities in the US with 39 in California. PowerTap will install its 1,250-kilogram hydrogen production and dispensing fueling stations at certain Andretti Group properties in California and the Andretti Group will exclusively introduce and

distribute PowerTap to the Andretti Group's deep network of major oil companies, chain retailers, cardlock operators, and independent fueling stations and provide certain support services to PowerTap.

This also means that PowerTap does not have to make any investment in real estate and will operate on a revenue sharing contract for hydrogen sales with the gas stations. The anticipated aggregate cost of all stages of development of PowerTap's 3rd generation product is approximately US\$17 million. Initial manufacturing is expected to start in 1Q21 and progress with production of units by 2H21.

In addition, PowerTap plans to participate in the California Dow Carbon Fuel Standard (LCFS) Carbon Credit program.

An important part of the business plan will be the utilisation of government grants, government loans and carbon credit incentives available to finance the build out.

### **Financing and Carbon Credits**

Tapping into Hydrogen Power PAGE 23 At each stage of development, PowerTap plans to secure financing of the project through available government financing and credits, and equity, debt & convertible debt offerings.

PowerTap has developed a model to fund its construction of hydrogen refueling stations on existing gas station properties across California, by borrowing US funds from the Department of Energy (DOE) loan program which funds 70-80% of hydrogen infrastructure costs. The first 2-3 stations will be equity funded and then 70% of the funding is expected to come from Green Loans. Green loans are a type of loan made available to finance eligible sustainable green projects.

In addition, PowerTap plans to participate in the California Low Carbon Fuel Standard (LCFS) Carbon Credit program. Carbon credits received from this program will provide a stream of revenue for PowerTap and a rapid payback on its investments.



California's LCFS market may be one of the most unique carbon emission credit trading programs, reflecting California's commitment to greenhouse gas reductions. The LCFS Carbon Credit program provides PowerTap an opportunity to generate revenue even before dispensing any hydrogen from its refueling stations by allowing PowerTap to sell its earned LCFS credits on an on-going basis on the emission trading markets.

The California LCFS program, established in 2009, was one of the first to focus solely on the

transportation sector, a difficult sector to de-carbonize due to its numerous stakeholders. California's LCFS program required the main fuel suppliers to reduce the carbon intensity of their fuels by 10% by 2020, from a 2010 baseline. The program was extended to require a further reduction of 10% by 2030, equivalent to a 20% total reduction.

Any fuel supplied to the State and put into motor vehicles that have life cycle emissions less than the baseline can generate LCFS credits. These credits can be generated from electrical vehicle charging, biogas (for compressed natural gas (CNG) vehicles), ethanol, other biofuels, and hydrogen production. In 2020, the LCFS program was a multi-billion-dollar carbon credit trading market.

hydrogen cars and the use of these stations will rise. There are two types of credits, the capacity or HRI credit and the more traditional LCFS fuel dispensing credit, which is based on the amount of hydrogen fuel that goes into vehicles. As a hydrogen station begins to dispense hydrogen, the proportion of HRI credits goes down and the number of dispensing credits goes up, generally keeping carbon credits stable. By participating in the LCFS Carbon Credit program, PowerTap plans to generate revenue from the earning and subsequent sale of HRI credits even before the sale of any hydrogen from its refueling stations.

The regulators who oversee the LCFS program allow LCFS credits to be issued simply if the hydrogen capacity were PowerTap has calculated that a minimum of US\$1.3 million can be generated from trading in emissions certificates per station, per year, even without generating revenues from the sale

> **Tapping into Hydrogen Power** PAGE 25

installed, even before hydrogen is dispensed. The theory is that once the stations are in place, more consumers will buy

To earn HRI credits, PowerTap must build refueling stations that meet certain criteria such as, the station must be open to the public, be available to all drivers, allow all major credit cards, have confirmation from three vehicle OEMs that their customers can use the station, and other standards that PowerTap plans to meet with its modular hydrogen refueling stations; and apply to CARB for the HRI credits. These credits are available for 15 years from the quarter following CARB's approval of the qualifying hydrogen station application.

a minimum of US\$1.3 million can be generated from trading in emissions certificates per station, per year, even without generating revenues from the sale of hydrogen. This is derived from the State of California's Low Carbon Fuel Standard infrastructure credit program. Should PowerTap achieve an initial launch of 500 stations in the State of California, the station network has the potential to generate up to US \$1.0 billion in annualized carbon credit revenues.

Once the HRI credits are validated with CARB, PowerTap plans to sell the credits in the emission trading markets on an on-going basis. An installed PowerTap hydrogen station cost approximately US\$4.0 million per station. PowerTap has calculated that Major clean technology companies have depended on carbon credits for years to augment cash flow and allow them to aggressively grow. In fact, Tesla recorded US\$397 million of carbon credit revenue in 3Q20, assisting Tesla in reporting US\$331 million of net income in the period. In 2020, Tesla received in excess of US\$1.5bn in carbon credits.



# OVERVIEW OF CLEAN POWER CAPITAL CORP.

CLEAN POWER IS AN INVESTMENT COMPANY WITH A CURRENT FOCUS IN THE HEALTH AND RENEWABLE ENERGY INDUSTRIES. CLEAN POWER OWNS 90%

The strategy of Clean Power is that investments that have been and will be acquired and held for short-term gains, income generation, or long-term capital appreciation, depending upon the specific investment. The paramount goal of the company is to generate maximum returns from its investments and to seek liquidity in its investments. Clean Power was previously known as Organic Flower Investments Group and changed its name in November 2020.

### IN POWERTAP, ITS LATEST INVESTMENT, WHICH IT INVESTEDIN OCTOBER 2020.

Clean Power now has ten investments in a variety of sectors having successfully held C\$120 million in investments during the past fiscal year and returned capital to its holders through the distribution of prior investments.

In October 2020, Clean Power completed its latest investment through the acquisition of a 90% equity interest in PowerTap. Clean Power paid an aggregate of 106.2m common shares at a deemed value of C\$0.30 per share.



# RECENT FINANCING

In **October 2020**, Clean Power completed a non-brokered private placement of 5.2m units of the company at a price of C\$0.25 per unit for gross proceeds of C\$1.3 million. Each unit consists of one common share and one warrant. Each warrant entitles the holder to purchase one additional share at a price of C\$0.50 per share for a period of five years from the date of issuance.

In August 2020, Clean Power completed a non-brokered private placement of 50.0m units of the company at a price of C\$0.07 per unit for gross proceeds of C\$3.5 million. Each unit consists of one common share and one warrant. Each warrant entitles the holder to purchase one additional share at a price of C\$0.50 per share for a period of five years from the date of issuance.

# SHAREHOLDER BASE & SHARE STRUCTURE

Clean Power is owned 90.1% by retail investors and the management and insiders own 9.1% of the shares on a fully diluted basis, including options and warrants. The share structure as at February 18, 2021 is shown in the table below.

Issued and outstanding

271.8 Million

Warrants	30.6 Million	
Options	16.2 Million	
Fully Diluted Shares	318.6 Million	

The company's shares are traded in Canada on the CSE under the symbol MOVE, in the US on the OTC under the symbol MOTNF and in Germany on the Frankfurt Stock Exchange under the symbol 2K6A. The company is currently seeking a Nasdaq listing.

As at the end of September 2020, the company had \$0.53m debt and cash of \$0.34m.

# MANAGEMENT 8. DIRECTORS

The Clean Power Management Team The CEO of Clean Power is Joel Dumaresq. John Martin, Theo van der Linde and Brendan Purdy are directors.

The PowerTap Management Team

**Raghu Kilambi, CEO and CFO** Raghu Kilambi is an experienced investor and entrepreneur with over 25 years of global business experience in public and private investments, building businesses and creating shareholder value. He has raised over US\$1 billion of equity and debt capital for private and public companies and been involved in many M&A acquisitions and exits. Raghu's experience includes operational management, financial reporting, corporate governance, corporate finance, public offerings, strategic acquisitions and investments, international business development, merchant banking and corporate restructuring in sectors including technology, telecom and mobile.

Most recently, Raghu was Vice Chairman & CFO of California-based ConversionPoint (e-Commerce software/services) which was sold in 2 M&A exits in late 2019 and early 2020 after filing a Nasdaq IPO prospectus for an Oppenheimer-led IPO in 2019. In addition, Raghu was previously the Co-Founder, CFO and Chief Strategy Officer of a leading VC-backed first-generation application hosting company that grew from start-up to US\$140 million in annual revenues and a peak Nasdaq market capitalization of over US\$2 billion.

Raghu has also been an investor in companies that were acquired by Yahoo, eBay and CGI. He graduated with Great Distinction with a Bachelor of Commerce and a Graduate Diploma in Public Accounting from McGill University, and qualified as a Canadian Chartered Accountant (inactive).

### Salim Rahemtulla, President

Salim Rahemtulla has over 30 years of private and public sector experience in real estate development, asset management, banking/ lending, operations and facilities management.

A former US naval officer, he has managed and lead cross-functional teams in the execution of \$2B in public and private sector residential construction projects primarily across Southern California, worked as a construction lender and in loan portfolio management at two major financial institutions, consulted on real estate/affordable housing projects in Los Angeles, and has served as the mission protection/ land-use compatibility program manager at a major naval installation with a large-scale military airfield and a deep-draft port.

Over the past decade, Salim has been involved in several real estate and renewable energy start-up companies, most significantly, Foton Technologies, a renewable energy company that has developed a proven clean, green gasification technology to produce electricity using opportunistic biomass feedstock and municipal solid waste and a real estate fund under the auspices of a Southern California-based investment bank.

Also, during this time, he supported the Navy and Marine Corps warfighter as a director of asset/facilities management overseeing the planning and development of mission-critical projects at a US naval installation, some of which were in support of RDT&E and missionfocused warfare center facilities projects.

Salim has an undergraduate degree from the University of Southern California (USC) in Economics with an emphasis in Social Sciences

## and Communication and an MBA from USC's Marshall School of Business.

### Cody Bateman, Technology Advisor

Cody founded Advantex Research Inc. to focus on creating complex simulations to optimize exploration and extraction techniques for the oil & gas industry. During the last 30 years the company has transformed itself several times while working in 11 countries and serving several government sectors, advanced research facilities, airlines, multi-national pharmaceutical companies, and a full range of organizations in the energy sector. He began working with NASA at Kennedy Space Center in 2012 on advanced insulation for cryogenic environments. During that time he has become an expert in cryogenic testing and the manufacture of several advanced test instruments used at NASA.

In 2018 the company rebranded itself as Cryotek LLC when it decided to concentrate on the future of liquid hydrogen as the fuel of the future and since that time has become a leader in Cryogenic Engineering by leveraging its long-term relationships with several large partners.

The company now focuses on technology commercialization of liquid hydrogen for vehicles, drones, maritime applications, large scale storage, thermal insulation systems and supply infrastructure.

Cody has a BS Electrical Engineering from Texas A&M and an MBA from Duke University (Top 10 grad).



### Kelley Owen, Chief Operating Officer

Kelley Owen has over 25 years of experience in executive business management and IT consulting, including senior management positions in several corporations. At Discount Tires, he served as a director and member of the executive management, sharing responsibility for the operation of the company's 135 locations with over 800 employees throughout California and Arizona. At International Transportation Services (Kline), he acted as director in charge of Information Technology and member of the executive management team operating four terminals with over 500 employees consisting of Long Shore Union members and management personnel transporting cargo worldwide.

In addition, he was a senior consultant at Nestlé Corporation working

on the implementation of the company's warehouse distribution system, a nationwide project covering Nestle's eight distribution centers with a total warehousing capacity exceeding eight million square feet.

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