



**dynaCERT Inc.**  
{DYA-V}  
SECTOR: ENERGY

STOCK PRICE \$0.82  
NO RATING  
NO TARGET

## WATCHLIST REPORT

# An ESG Benefactor; A Carbon Emissions Reduction Technology that Took Years to Perfect is Now Ready to Scale

**OUR TAKE:** In our continued search for investment candidates to benefit from the sustained build in ESG sentiment, we recently sat down (virtually) for a corporate introduction with the management team of dynaCERT. Established, with an ~\$270 MM market cap, the shares currently trade on the TSX-V under the ticker “DYA” while the company recently received conditional approval to graduate to the TSX. DynaCERT manufactures and distributes Carbon Emission Reduction Technology (CERT) for use with internal diesel combustion engines that increase fuel economy while lowering emissions.

DynaCERT differentiates itself from the pack through its unique synergistic product offering, namely by enhancing the productivity of the machinery to which it is attached with up to 19% fuel savings, while reducing the machinery’s carbon footprint by up to 50%, and deployment of a recurring revenue stream with data monitoring of the technology. This is a win-win for users of the technology from both a cost savings perspective while also working to meet increasing corporate focus on green initiatives. DynaCERT’s flagship product, HydraGEN™, can be easily connected to construction machinery, enabling it to deliver hydrogen into the air intake of internal combustion engines, effectively reducing emissions and improving fuel efficiency.

There are high barriers to entry in this niche but growing industry. Prior to commercialization, the product was in development for 16 years, at a total cost of ~\$60 MM. Its effectiveness has been substantiated by numerous accredited third-party verifications, including NASA. The Company is backed by healthy institutional support, including a \$14 MM investment from mining financier Eric Sprott in November 2019. With the technology now perfected, the Company’s strategy is focused on deployment to expand its market reach by sector, by product, and by its data-driven subscription service offerings.

We reiterate our December 2019 thesis that ESG investing is building big momentum and is here to stay ([link to report](#)), and see dynaCERT benefitting from outsized market returns as investors look for new ways to play the recovery from the indiscriminate pandemic-related selling since late Q1/20.

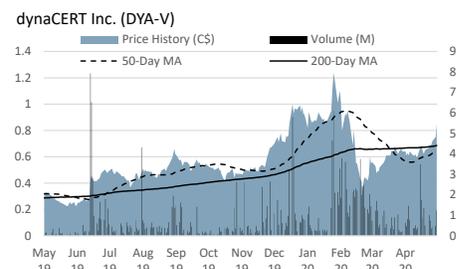
## KEY HIGHLIGHTS

- ◆ **Perfecting the product.** In principle, dynaCERT’s patented “HydraGen” technology functions by utilizing a computerized system to calculate and inject trace amounts of hydrogen into the combustion process to enhance the burn. It sounds simplistic enough, however, the key is to get the right mixture and the right amount delivered at the right time to hit the combustion sweet spot. The Company has gone to great extremes to verify and certify globally, including testing with NASA rocket scientists.
- ◆ **Ready to scale with strategic partnerships.** DynaCERT’s marketing strategy is to provide a sale and product leases by partnering with major service providers. The Company currently has 27 retail dealers globally, and recently made KarbonKleen the exclusive dealer of their product in the U.S. KarbonKleen is subject to a minimum quota of 150,000 units in the next three years (MOU for 1 MM over life of the agreement). The agreement aligns the Company with Velociti, one of the largest service providers in the transportation industry, demonstrating their partners’ confidence in the product. With this established global distribution network as a sales pipeline, the Company is also primed to seize additional upside from the capture of carbon credits and software licensing – what we see as a high-value recurring revenue stream for the Company that is likely to be overlooked by some.
- ◆ **Value Proposition to end-user is attractive and more than just a green initiative.** In addition to the partnerships above, dynaCERT has an agreement with H2 Tek that provides a pipeline into the mining industry. H2 Tek leases mining equipment to mines around the world and is currently in discussions with 43 active mines for dynaCERT’s products (6 currently conducting product trials). Hauling trucks used at mining operations can use up to \$1 MM of diesel a year. DynaCERT products can generate 6-19% savings in fuel consumption; even a 5% reduction in fuel expense (\$50K) indicates a less than 9-month payback to the user.

**The timing is right for an opportunity to scale ESG related technologies.** The investment landscape has changed in the last year, particularly in the last three months due to COVID-19. The investment community had already begun to place a higher emphasis on ESG factors as key investment criteria prior to the pandemic induced market sell-off. As investors look to position portfolios for a recovery, ESG technologies that provide scalable revenue growth opportunities are likely to be sought after. There is a vast market opportunity in front of dynaCERT given that there are approximately 1 billion internal combustion engines operating globally, with another 100 million being built annually. With the unique technologies proven to provide significant value to end-users while still garnering healthy gross margins, we believe dynaCERT merits augmented investor attention.

## KEY STATISTICS AND METRICS

52-Week High/Low	\$1.25 / \$0.22	Net Debt	\$(16) MM
YTD Performance	20%	Enterprise Value	\$256 MM
Dividend Yield	n/a	Daily Volume (3 mos.)	1,210,843
Shares O/S	345 MM (basic)	Currency	C\$ unless noted
Market Capitalization	\$272 M	Website	dynacert.com
Cash	\$16 MM	CEO	Jim Payne



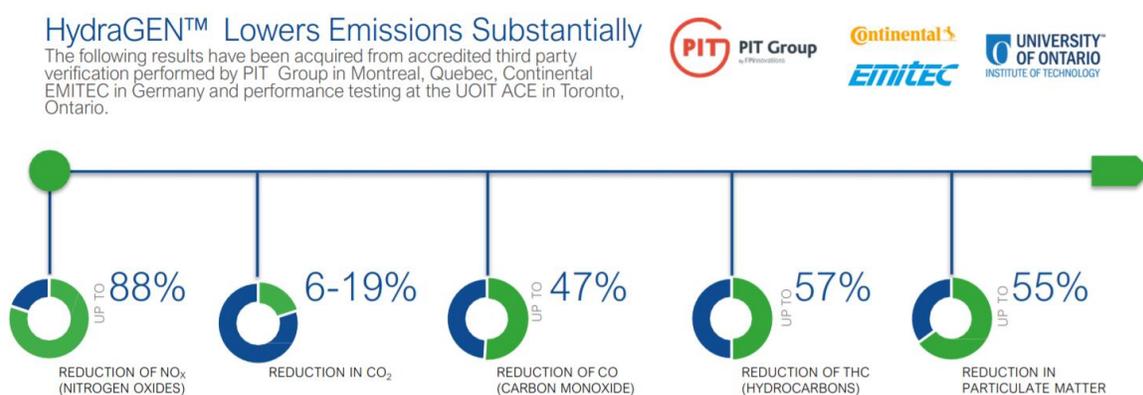
## Company Profile

### Overview

DynaCERT Inc. manufactures and distributes Carbon Emission Reduction Technology for use with internal combustion engines. The Company’s patented technology creates hydrogen and oxygen on-demand through a unique electrolysis system and supplies these gases through the air intake to enhance combustion, resulting in lower carbon emissions and greater fuel efficiency. The technology is designed for use with many types and sizes of diesel engines used in on-road vehicles, reefer trailers, off-road construction, power generation, mining and forestry equipment, marine vessels and railroad locomotives. From its manufacturing facility based in Toronto, the Company mass produces different products for various sized automobiles and wholesales to 25+ global distributors. The Company has been working on their product line since ~2006, funding research and development through private placements totaling ~\$60 MM.

The Company is now at the stage where it is ready to accelerate sales and commercially launch products through its distribution network. In addition to the product sales, we are particularly encouraged by the opportunity for dynaCERT’s data technology to be eligible for carbon credit collection, which they plan to split with their customers, creating the opportunity for recurring revenues.

Figure 1: Overview of Substantial Decrease in Emissions



Source: Company Reports

### Capital Structure

**Capital Structure.** The stock is tightly held with ~30% in the hands of insiders, 20% in family office holdings, and 10% to well known mining financier Eric Sprott, who invested \$14 MM into the Company in November 2019. Sprott was particularly interested in the application of dynaCERT’s product to mining applications. The Company is currently debt free and has ~\$15 MM in cash (cash burn of ~\$600k/month). Figure 2 provides a summary of the capital structure.

Figure 2: Capital Structure

<p><b>334M</b></p> <p>Shares Issued &amp; Outstanding</p>	<p><b>36M</b></p> <p>Warrants</p>	<p><b>26M</b></p> <p>Stock Options</p>	<p><b>TSXV</b></p> <p>Stock Exchange</p>	<p><b>DYA</b></p> <p>Ticker Symbol</p>
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Source: Company reports

**Conditional graduation to TSX received.** On May 14<sup>th</sup>, 2020, dynaCERT announced receipt of conditional approval to graduate to the TSX from the TSXV. Final approval is subject to the Company fulfilling all remaining conditions as required by the TSX, including the completion of a traditional underwritten prospectus offering with a minimum of 50 subscribers, raising a minimum gross proceeds of not less than \$5 MM and compliance with public distribution and all other standard listing requirements of the TSX on or before Aug 12<sup>th</sup>, 2020.



## Product Offering

**HydraGen series.** The Company's primary focus is on the commercialization of its HydraGen product line, which is the carbon emissions reduction technology that reduces pollution from internal combustion engines. The hardware component is compact and is designed as either an after-market add-on to existing fleets (trucking, mining, construction), or can be added at the OEM level. Figure 3 below is an illustration of the series product lines while Figure 4 depicts an after-market version that has been added on to a Class 8 truck.

Figure 3: Product Line



Source: Company Reports

Figure 4: An after-market HydraGen unit installed on a Class 8 truck



Source: Company Reports



**HydraLytica data analytics; Recurring revenue model.** This real-time analytics program captures data from the unit and stores it in a universally accessible cloud, allowing the site manager to see all truck installations in real-time. The data is owned by dynaCERT and is accessible to the end user with a subscription fee-based model, generating recurring revenue for the Company. The plug-in gives onboard diagnostics on up to 50 different data points such as fuel consumption, mileage, CO2 emissions, etc., that can be used by the fleet owner. Most importantly, the technology has been tested, and shown positive results including less fuel consumption, less emissions (CO2, CO, NOx), more power and better torque.

## Competitive Landscape

### Out-in-Front in a Growing Industry

**First mover advantage with high barriers to entry.** DynaCert holds the enviable position of being at the forefront of the growing global hydrogen economy. It benefits from having no direct competition for market share in the industry it has, in essence, created. Given the high initial capital expenditure over a development period of nearly two decades, the Company is poised to benefit into the foreseeable future from being the first to bring its globally patented product to market. Through our discussions, management further emphasized the Company’s relative advantage over its most closely comparable companies, which operate at much smaller scale and lack key marketable features that dynaCERT offers, particularly sophisticated computerization and carbon credits. Achieving product certification across multinational jurisdictions, while solidifying its marketing approach and executing strategic partnerships, positions dynaCERT healthily ahead of new entrants to the market.

**Analogy/competitor read-through: Long-Haul Truck Trailer Skirts.** A somewhat comparable technological advancement introduced to an industry that dynaCERT serves is the trailer skirt. The trailer skirt focuses on fuel savings from reduced drag and has seen widespread adoption since its introduction to the longhaul trucking industry approximately a decade ago. Akin to HydraGen, trailer skirts are easily affixable aftermarket add-on devices designed with the intent to improve aerodynamics, thereby lowering fuel costs. The purchase cost of a trailer skirt is marginally less than dynaCERT’s product offering, but falls short on several key features as identified below. Noting that 90% of long-haul trucks now feature trailer skirts, we are buoyed at the read-through this reflects for dynaCERT’s products’ growth trajectories.

Figure 4: Trailer skirts vs. dynaCERT

	Trailer Skirts	
Initial Cost (non-wholesale)	~\$3,000	~\$9,000
Fuel Cost Savings	1%	6-19%
Years on the Market	9	1
Carbon Credits	✗	✓
Data-Driven Recurring Revenue	✗	✓

Source: Haywood Securities Inc, Company reports

### The Diesel Market: Regulation Outpacing Innovation

**Global demand for diesel is growing.** While environmental restrictions and market uproars such as the 2019 VW Emissions Scandal (“Dieselgate”) have propelled tightening of emissions at an even faster pace, the demand for diesel continues to grow. The technology transition to electric powered vehicles and equipment is likely still decades behind where it needs to be in dynaCERT’s primary markets. While some jurisdictions are moving to ban diesel-fueled engines, the larger trend is leaning more towards tightening emissions. According to a report published by Fior Markets in February 2020, the global diesel engines market is expected to grow from USD 8.04 billion in 2017 to USD 11.46 billion by 2025 at a CAGR of 4.5% during the forecast period from 2018-2025 (source: [Fior Markets](#))



## Forecasts

### Product Sales

**High Margin Product.** As discussed, there is a massive addressable market for DYA's product and the secondary market for internal combustion engines is roughly 1 billion world-wide, and 100 MM new engines built each year. Wholesale the Company sells for ~\$6,200/unit to a distributor while the unit cost is ~\$3,000/unit (~50% GM). The Company conservatively estimates sales of ~5,000 units, and more aggressively estimate up to ~8,000 units sold in the next 6-12 months given their current distribution agreements.

**Rough Math 12-Month Forecast.** DynaCERT's manufacturing plant has capacity of 2,000 units/month/shift, which has potential to run three shifts/month (i.e. up to 6,000 units/month):

- i. **Base Case (full capacity) = 24,000 units/yr.** Revenue (at C\$6,200/unit) = C\$148M in revenues ... Gross Profit (at 50% GM) = C\$74M
- ii. **Upside Case (3 shifts) = 72,000 units/yr.** Revenue (at C\$6,200/unit) = C\$446M in revenues ... Gross Profit (at 50% GM) = C\$223M
- iii. **Current order log.** DynaCERT recently signed a purchase order for 3,000 units for KarbonKleen. KarbonKleen sees potential for 150,000 units sold over three-year period. DynaCERT also has a 1,000 unit order with a European distributor.

In addition, these forecasts do include neither a recurring revenue component from the Company's analytics product, nor carbon credit agreements.

### Carbon Credit Revenue

**Recurring revenue stream an attractive value proposition.** Long-haul trucks can generate as much as \$2,000 - \$3,000 in carbon credits per year using the HydraLytics system, which would calculate carbon emissions (leading to measurement of carbon credits). DynaCERT has engaged a U.K. based law firm to gain the regulatory approvals required to verify the accuracy of the carbon credit component of its subscription offering through dynaCERT's HydraLytics program. An application has been submitted on behalf of the Company to VERRA, the U.S. leading global agency for carbon credit methodology. This represents a material opportunity for recurring revenue, as the terms of partnerships with participating companies would entitle dynaCERT to receive an even split of the carbon credits awarded. Once approvals are in place, fleet managers would request carbon credits from the regulatory body, with half going to dynaCERT, effectively meaning it would receive 50% margins on original product for recurring revenue.

## Well Timed Opportunity to Scale ESG Related Technologies

As the investment landscape reshapes in a post COVID-19 world, we believe the momentum that has been building in ESG investing will continue with technologies employed by those like dynaCERT, poised to attract attention. There is a vast market opportunity in front of dynaCERT given that there are approximately 1 billion internal combustion engines operating globally, with another 100 million being built annually. DynaCERT appears to be well positioned to capitalize with a concerted sales push now that its technology is patented and commercialized. With the unique technologies proven to provide significant value to end-users while still garnering healthy gross margins, we believe dynaCERT merits augmented investor attention.



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### Important Disclosures

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◆ n/a

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	%	#	IB Clients (TTM)
<b>Buy</b>	60.8%	59	82.6%
<b>Hold</b>	12.4%	12	8.7%
<b>Sell</b>	0.0%	0	0.0%
<b>Tender</b>	2.1%	2	0.0%
<b>UR (Buy)</b>	1.0%	1	0.0%
<b>UR (Hold)</b>	0.0%	0	0.0%
<b>UR (Sell)</b>	0.0%	0	0.0%
<b>Dropped (TTM)</b>	23.7%	23	8.7%

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