



TOP 35: Curated and Represented by Sustainable CleanTech Implementation Company (SCI Co.) Inc.

Here is an overview of the top 35 CleanTech technologies which are mostly commercially ready for Global, Metropolitan and/ or rural off-grid CleanTech Markets. The nature of these Cleantech technologies is that they can be utilized most anywhere (in cities, island nations or off grid to vast remote locations.) and they can also work together to complement and to enhance each other in creating a greater multiplier effect of greater efficiencies leading towards a Circular Regenerative Economy..

1) A unique, game-changing technology based on Concentrating Solar Power (CSP) and an innovative evaporation system to desalinate sea water cost effectively and with zero carbon emissions or environmental impact; A growing multi-billion market need (emergency) exists for the creation of freshwater in a sustainable manner, across 75+ applicable markets worldwide, serving public and private requirements.

2) Off-grid Solar refrigeration - The new generation of cooling technology assures that even with patchy energy supply reliable cooling will be guaranteed for at least three days. This technology provides the basis for substantially improving the living conditions in developing and emerging countries – even without constant power supply. This patented technology is extremely robust, low-maintenance and produces no emissions in daily use.

3) Leading an agricultural revolution. We aim to provide farmers with safe-to-use, cost-effective, targeted biocontrols that stop pests while protecting crops, pollinators, and land before and after harvest. Since we help farmers create greener, cleaner crops, we provide consumers with the greener, cleaner foods they demand. And not only are we equipping farmers with safer products to handle, we're also helping farming families promote more sustainable land for future generations.

4) Transforming agriculture systems is the single most important thing we can do to combat climate change. Our company empowers the food and agriculture industries to adopt, scale and monetize resilient agricultural practices. We are a multinational team of scientists, agronomists, engineers, and software developers committed to transforming the supply chain from farm to fork to ensure a prosperous future for people and the planet.

5) 24/7 Solar lighting - The first quantum physics based ecological energy generation solution whose semi-transparent crystal transforms the luminosity of the sun without the limitations of photovoltaic generation, into electrical energy production. Because we use a different part of the light spectrum, this is not a solar panel but rather a "light" panel - a disruptive next generation solar glass.

6) is a prominent OEM company primarily focused on developing world class rotary engines to mitigate carbon emissions, provide an alternative technology to promote hydrogen fuel and hybrid vehicles and significantly change the world of air, water, and ground transportation. They are now

entering the Asian marketplace for manufacturing purposes and to help bring down overhead costs dramatically.

7) This technology enables a rapid, low-cost, clean, state-of-the-art All-Underground infrastructure. Infrastructure 2.0: 100% clean renewable power, ultra-high-speed Internet, pure water, more...to begin boring Underground tunnels..

.A Super-Grid for power, fiber, water, solid waste, wastewater, green hydrogen & parcel delivery. We can lower tunnel costs by up to 95% & be 100x faster.

8) A clean technology Solar company behind the development and production of robust lightweight low-profile solar panels that can fit almost anywhere. Being ten times lighter and ten times thinner than conventional panels, our solar solutions can harvest renewable energy from surfaces previously never considered suitable for solar power. We have a graphene solar cell in development.

9) The first integrated technology thermal solution to create green hydrogen from plastic waste. The Plastic & Emissions pollution of our planet needs no introduction. Developed internally with the design aimed at gasification efficiency and Synthesis Gas extraction optimisation, the reactor is unique to us and forms part of our patented technology stack. The result of all the above innovation is an average of a 40%* increase in efficiency equal to a plastic input recovery of over 90%. This successfully converted multiple carbon based feedstocks including plastic polymers into, Char, SynGas and was subsequently separated into purified Hydrogen.

10) A new generation vehicle design, engineering and manufacturing company in the rapidly growing zero-emissions vehicles industry. EAV vehicles want to make transport as environmentally friendly as possible with no loss of efficiency or capability to businesses. Based on current eBike

regulations, EAV vehicles have been 'engineered down from a van, not up from a bicycle' to produce uniquely dedicated lightweight commercial vehicles. EAV reduces the impact vehicles have on our collective carbon footprint and helps decrease pollution and city traffic congestion - especially with the huge increase in online sales and deliveries.

11) Atmospheric Water Harvesting - Patented and ready for commercialization. A new approach for the collection and distribution of water. Unlike other atmospheric systems that exploit the process of condensation, water vapor to liquid water collecting water from the atmosphere, this technology exploits the process of deposition, water vapor to frost. The system provides a technological advantage to maintain sub-zero temperatures while requiring very little power because it uses significantly less energy per litre of water at electrical requirements as low as 1.5 Watts per litre less than any other method currently used globally to collect and supply water.

12) HVAC condensing unit (the compressor and condenser) reduced energy requirement to cool indoor environments. Maintaining a constant low refrigerant temperature greatly reduces the work of the condensing coil and compressor with dramatic energy savings. In simple terms, a standard 2,200 Watt cooling capacity HVAC condensing unit, operating in a temperature of 32 °C may typically consume 1,450 Watts of electricity, conversely, the same 2,200-Watt condensing unit utilizing a HVAC system may only consume 135 Watts of electricity...an energy consumption reduction of approximately of 90.5% also extending its life cycle for an additional 10 -15 years.

13) Plastic Waste to Energy Technology with the most highly efficient, modular technology which translates into Highly efficient near emission free, mass production scalability. (Shipped in 40 ' containers for rapid modular assembly. We have identified the need to protect mother earth and mankind and started to find a practical solution to treat waste plastic in a clean & economical way. We and our partners have demonstrated the Continuous Fast Steam Thermal Decomposition (CFSTD) technology in treating waste tires, wood waste and E-waste. After testing for years, we believe that such

technology could also be one of the best solutions all over the world to turn waste plastic into valuable products with nearly zero pollution during the process. The main byproducts from this WTE system are bio-fuel, syngas, carbon black and hydrocarbon. If integrated with other green energy technologies, hydrogen can also be produced to make the whole process even more efficient and cleaner.

14) The Air Battery Energy Storage Solution uses no chemicals and therefore has zero emissions, other than hydro - the Air Battery has the lowest operating cost of any storage technologies including deep cycle batteries and diesel generators as well as the generation of 100% clean water and air as by-products. Scoring high on energy efficiency at 74% round trip, higher EROI (Energy Return on Investment) values, the Air Battery is modular and scalable, micro grid friendly, has no performance degradation during its 30+ year life span, on-demand high power delivery capability and customizable configurations ranging from 50KWh to 50 MWh systems.

15) The temperature-controlled logistics industry has had very little innovation since the early 19th century. Today however, fluctuating fuel costs, government regulations and the environmental pressures these operators are subject to, is fast changing the industry perspective. We now have a solution that solves all of these issues for the operators, reducing if not eliminating the need for fossil fuel, in turn satisfying the required, if not expected environmental responsibilities of these companies and at the same time delivering in line with all government regulations. Moreover, providing a solution that conveys an average return on investment for the end user of around 4-years, with an expected lifespan exceeding 18-years. Our company focus is to produce 'off-fuel' temperature-controlled shipping or storage trailers capable of being utilized across all relevant industries from supermarkets through to the military. The potential is vast for this solution, moving the industry away from polluting and carbon-intensive processes toward sustainable, cost-effective systems that are better for the planet and the end user's bank balance.

16) The largest algae producers are currently in Australia. These companies comprise a mix of inland algae operations and ocean-sourced or beachcombing seaweed harvesters. Many new players are entering the market and it is expected that the number of industry participants will rapidly increase over the next few years. With algae as a frontrunner, Australia is well positioned to capitalise on this new and emerging sustainable market. Many other extracts can be derived from algae, including beta-carotene, chlorophyll, protein and a wide range of minerals and nutrients. The consumer appetite for algae-based products is rapidly growing, especially those used for health, skincare and consumption. Potential new products and extracts are being discovered and patented at a rapid rate.

17) MISSION - Reduce our carbon footprint by improving one of the world's single largest driver's of energy consumption and related carbon emissions: heating, cooling, and refrigeration applied in our living spaces, businesses, water, and food.

An unprecedented advantage for both residential and commercial consumers, this high-efficiency, fuel-flexible device that replaces complex heating, cooling and potable water systems—reducing fuel consumption, lowering operational costs and dramatically cutting carbon emissions. A high-efficiency, non-toxic refrigerant HVAC, hot-water and refrigeration system, all in one device. Our patented Tech helps end users become frontline leaders in carbon reduction, cutting carbon dioxide emissions—and energy costs—by as much as half across residential and commercial applications.

18) Energy GTH&L system is the optimal system for low cost production of hydrogen and is a stand-alone profit centre byproducing clean burning hydrogen and cleaner burning designer diesel fuels. Combining low capital with low operating costs the highly efficient energy system (up to 95% carbon monoxide conversion for hydrogen production and up to 89% for diesel production) is compact and utilizes reliable components: reformer engines; heat exchangers; compressors and gas shift reactors, FT Reactors, catalysts, all proven technologies over several decades. It is unmanned and operates on-line. The system can be used wherever a source of methane gas exists. Hydrogen and Cleaner Diesel for

Industrial Supply and Fueling Stations - Energy GTH&L. The price point to produce Blue Hydrogen and is in the \$1.50 per kg range.

19) Direct Photosynthetic Bio Butanol Production from Carbon Dioxide Emissions Using Cyanobacteria. We are a clean technology company that engineers cyanobacteria to directly secrete biobutanol in bioreactors using sunlight and waste carbon dioxide streams, such as desalination plant carbon dioxide emissions. We can also produce other high value chemicals including food supplements.

20) One of the most common and best substitutes for fishmeal is protein concentrate of vegetable origin. This vegetable protein substitute is particularly needed to secure fish production for the human food supply from aquaculture. In our project, an enriched vegetable soy protein, the soy concentrate, is produced in a technical plant. In our tech plant (Refine Protein System), the premium product soy protein concentrate is obtained from simple soy meal. This replaces fish meal. While some of this fishmeal is sold to 3rd parties, a portion of it will be used in an aquaponics facility onsite. Aquaponics is a food production system that combines Aquaculture (production of fish or crustaceans) with Hydroponics (cultivation of plants without soil). Fish, shrimps and vegetable/herbs are produced for immediate regional consumption within the adjacent metropolitan area. This results in many synergies and the concept is the ideal complement to protein and energy production.

Market situation for fish feed production and by-products. Protein is one of the basic elements of human and animal nutrition. The demand is therefore increasing due to the constantly growing world population. According to forecasts, this will increase by about 50% by the year 2050. To ensure a sufficient supply for the world population, this means that food production must be increased by at least this percentage compared to today.

21) We are developing a new photoamperic (PA) solar device technology that is designed to convert light to electricity over the entire spectrum from infrared to ultraviolet with intensities from full sunlight to low light into electricity. The Company forecasts that its PA solar cells will be able to

produce up to 4x as much power as current photovoltaic devices (PV) and that its manufacturing costs would be 80% lower than current PV cells. This would completely change the economics of solar power and accelerate the global adoption of PA technology. PA would be the biggest breakthrough in energy in over 70 years. With its greater efficiency and lower cost, we forecast our technology will be superior to conventional energy sources, such as coal, oil, and natural gas, even without tax incentives, subsidies, and regulations requiring solar installations. With its anticipated Levelized Cost of Energy of less than \$0.01/kWh,

22) On a mission to connect the world to the sun. Our vision is a world where all people and organisations can harness affordable clean energy to ensure a healthy climate for future generations. What we do - With our Sun exchange program, anyone, anywhere can buy solar cells and lease them to credit worthy businesses and organizations involved in: education, agriculture, healthcare.. Energy consumers benefit from reduced energy costs and solar project funders earn income while creating a more sustainable future. Our Sun Exchange program bills and collects electricity payments and distributes payments to solar cell buyers through our integrated technology platform.

23) A novel approach to scalable CSP Solar + Energy Storage Clean, low-cost electricity, Night & Day 24/7.. After scaling manufacturing we project to drive the combined price-point of Solar Energy production and 24/7 Energy Storage down to 4 cents a kWh. We have a strong Engineering Partner and a strong potential pipeline of projects.

24) Our Breakthrough Tech shifts the paradigm in clean energy generation by using our unique proprietary design to safely and efficiently unlock, from water, the world's most abundant, powerful and clean energy source – green hydrogen. At a price-point below \$2 usd per kg.

25) How a solar-powered street lamp became the AI industry's most overlooked compute asset. The artificial intelligence industry has a power and

cooling problem. Not a software problem, not a model problem — a power and cooling problem. The world's largest technology companies have committed a combined \$300 billion to data centre construction this year alone. Microsoft has pledged \$80 billion. Google, \$85 billion. Amazon, over \$150 billion. The single biggest constraint on each of those programmes is not chips, not talent, not regulation. It is access to grid electricity.

26) Revolutionizing Indoor Farming - Feed the World with Vertical Farming. Transform your commercial agriculture operation. 175+ validated crops Lower Cost vs. Hydroponics. Beyond Organic certification — zero pesticides, zero chemicals. Harvest in as little as 4 days. Simple SOPs — no PhD required to operate. Robust Temperature Range - Works consistently in temperatures from 0°F to 100°F. No delicate system tuning. 90% Less Water - Revolutionary water retention in the bio-enriched medium vs. hydroponics evaporation.

27) A technology company looking to reshape the electric vehicle (EV) market and the automotive industry. A Range Extender, addresses one of the challenges to rapid EV adoption. The EV market is experiencing enormous growth driven by such factors as technological advances and government policies to address climate change. One of the challenges facing increased EV adoption is “Range Anxiety”, a driver’s fear of having enough charge to cover a long distance. Our Range Extender offers advantages over other range extenders currently in the market. It will double the range of any EV; it doesn’t rely on fossil fuels as it’s energy source, but rather the vehicle’s motion making it a clean technology; and it is manufactured from readily available materials.

28) Food is medicine. The healthiest, most nutrient-dense foods are nourished in sunlight and living soil.- Our Indoor Light Tech brings true

sunlight indoors for full genetic expression, creating high quality foods, and natural healing plants never before available inside. It is the most energy efficient and cost effective light available w/ the fewest inputs and polluting outputs.

29) Green Hydrogen - The demand for energy is ever growing whilst it is becoming increasingly expensive. The energy landscape is evolving with distributed and emerging technology leading the way. We are coming together to deliver energy saving ultra low carbon hydrogen (H₂) solutions with holistic monitoring and control. Our vision is to change industry for the better by harmonising and reducing pollution and cost. Harness the Energy! By treating water through the activation process of H₂O transmutation, the composition of water enables combustion. This process allows extremely economical hydrogen extraction from water and by modifying spin orbitals and molecular kinetics. This allows a new process for producing hydrogen at energy efficiencies currently exceeding conventional laws of energy conservation. This process allows the water to split into H₂ and O₂ which can also be used to run internal combustion engines and turbines effectively allowing near zero emissions and higher efficiencies.

30) Revolutionizing Disruption Technology - Mimicking The Nature -----
- technology reverses natural weathering processes to convert waste materials into synthetic, fertile soil for agricultural use in a matter of hours or a day rather than million years eliminating hundreds million tons of landfills. Innovative Scientific Methods - The process utilizes : Float & sink segregation technique without need of prior segregation at source to streamline plastics, organic & inorganic matters. Hydrolysis using alkaline activated red mud to crack all organic matter into reactive bio-materials to arrest all aerobic and anaerobic decomposition processes that generate greenhouse gases, and eliminate all pathogens, parasites, vectors and weed seed those are harmful for plants. Activating Mineralization process to

precipitate and sediment all slurry solids and dissolved solids in leachate for absorption of heavy metals and re-create new mineral organic nutrients. Sustainability and Resource Optimization - ----- technology supports environmental sustainability by optimizing resource use and reducing landfill waste.

31) Benefits - Versatility and Efficiency - we can process a wide variety of waste streams.

This technology transforms waste into a resource by converting various waste streams into low-carbon energy through an innovative process that not only reduces landfill waste, but also generates valuable energy.

Operates at ~220°C, 350 psi to break down waste into slurry.

It deploys in ~5 months.

HTC handles diverse waste streams with minimal sorting required. (HTC) technology to deliver clean energy with a small footprint and low cost.

The system is modular and scalable—easy to start small, expand as needed, and deploy anywhere.

By handling both wet and dry feedstocks with little sorting required, it creates circularity in waste management while remaining flexible, practical, and affordable for any community or industry.

Value Proposition - We adapt our output to market demand, producing the highest value revenue.

Competitive Advantage - Our solution is integrated, adaptable to various feedstocks without sorting and dewatering, offers flexible commercial outputs, and operates with a low capital cost.

Modular - Allows for easier maintenance, faster deployment, and the flexibility to adapt to different waste streams or site-specific requirements. It also supports smoother integration with existing infrastructure.

Fast - With a rapid processing time of just 30 minutes to 4 hours, our solution

outpaces traditional waste-to-power (WtP) alternatives—delivering faster results and greater efficiency.

Accessible - Low cost, scalable projects reduce capital barriers, deliver early cash returns, and generate strong ROI— making waste-to-power financially viable and accessible for communities and investors.

32) Ultimate Solution for Ecological Balance and The Finest Water Quality

Our wave technology proves that changes are significant in the resonance frequency, electrical properties, the normalization of water molecule cluster size, and the proportion ratio of the trace elements in the water. By changing of those water physical characteristics, the different types of wave formulated water have different specific type of functions and can be used for various applications such as river pollution treatment, aquaculture etc.

Our wave Technology is a water-based and chemical-free solution with environmental friendly products for a variety of Agricultural, Industrial and Municipal Wastewater, as well as other pollution problems. These solutions can enhance the natural process of self cleaning mechanism within an ecosystem. Wave solutions significantly reduce (BOD), (COD), and (TSS) in effluent discharge. this tech is also very effective in removing fats, oils and grease (FOG) as well as petroleum hydrocarbons, and even heavy metal contamination in soil & water. Our Tech provides excellent odor control by breaking down hydrogen sulfide, complex mercaptans and other sulfur compounds.

33 & 34) 2 software breakthroughs that reduce energy consumption, water consumption and cost by over 95%.

Data centers - Quantum security for data centers and other software/hardware applications. Software has a significant deployment rate advantage over hardware. If our software breakthroughs can reduce energy

consumption, increase speed, reduce cost, shorten deployment and remove water consumption, they should be considered to offer an immediate stage 1 deployment advantage. We have two software solutions for Data Centers. One has been benchmarked at over 95% energy saving without changing hardware. The other demonstrates potential efficiency speed and efficiency gains of between 100 and 1000 times over current deployments. The effect this has on the perceived global buildout crisis is obvious. Any gain of over 95% is a gain across all factors. Energy consumption requires 95% less powerplant capacity projections etc. If water consumption is reduced by 95%, it is actually reduced by 100%. Why? Because the total cost is also reduced by this much and conventional cooling is now cost effective at only 5% hardware deployment for the same performance. Evaporative cooling is simply not financially justified.

The problem is being considered from a current perceived perspective. The assumption is that a certain number of data centers need to be built, a certain number of chips are needed and these centers are projected to consume X amount of gigawatts and X gallons of water. This is not correct. We would like to propose a far more optimistic and lower cost option. We have more than one solution and each has significant market potential in many other areas, increasing profitability and economic viability. Compared to current cost estimations, the budget is modest with a significant upside potential.

35) Revolutionizing Distributed Intelligence for Real-Time Data*

A cutting-edge platform that harnesses the power of distributed and decentralized intelligence to connect real-time data from various sources, including biosensors, Internet-of-Things (IoT), terrestrial, extra-terrestrial, and autonomous systems.

By integrating Active Inference, Spatial Web, and our proprietary Quantum Intelligence and Self-Adaptive Intelligent Network

Architectures, we are poised to transform the way we approach data-driven decision-making.

A New Era of Sustainability* - Quantum and AI hold real promise for addressing climate change, but we must break down silos to achieve true transformation. It's not just about breakthrough ideas; we need ecosystems that drive meaningful change. As we develop innovative solutions, we must also acknowledge the hidden costs of AI, including environmental degradation, social inequality, and exploitation.

Rethinking AI for People and the Planet* - While AI is often touted as a solution to global challenges, its lifecycle raises serious ethical and environmental concerns. From mineral extraction and energy consumption to e-waste dumping and labor exploitation, the impact of AI can be devastating. Rather than relying solely on tech-driven fixes, we need to address the root causes of climate change and social inequality. As we say, "We cannot consume our way out of the climate crisis, but we can rethink AI."

By prioritizing sustainability, ethics, and human values such as care, technology can serve both people and the planet rather than depleting them.

Connecting the Unconnected: 100M Smallholder Farmers

Our focus is on empowering 100 million smallholder farmers, rural field operators, and technical personnel through IoT-enabled solutions. However, we recognized that last-mile connectivity remained a significant challenge. To address this, we've developed a cost-effective and efficient way to roll out smart agricultural monitoring systems to remote farms, eliminating the need for costly infrastructure.

Breakthrough Solution: NB-IoT Enabled Agriculture Monitoring* - Our innovative solution leverages NB-IoT technology, utilizing existing off-the-shelf agricultural sensors and a Nordic Semiconductor nRF9160 SiP device to transmit sensor data in LoRaWAN-style packets. This approach not only reduces costs but also provides a more robust and reliable connection. The initial trials indicate a significant reduction in network charges from \$50 to \$0.58 per month per device.

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