The background of the entire page is a photograph of a night sky filled with stars. In the lower half, the dark silhouettes of several evergreen trees are visible against the starry sky. A solid dark green wavy line separates the image from the white footer area.

2012 NORTH SKY CAPITAL

IMPACT REPORT

North Sky
CAPITAL

Contacts

Scott Barrington

Managing Director & CEO
612 435-7170
sbarrington@northskycapital.com

Megan C. McElroy

Vice President
214 459-3133
mmcelroy@northskycapital.com

Office Locations:

33 South Sixth Street
Suite 4646
Minneapolis, MN 55402

100 Crescent Court
Suite 700
Dallas, Texas 75201

northskycapital.com

About North Sky Capital

Our CleanTech funds improve the world in which we live. North Sky Capital's investments directly reduce humanity's impact on the earth, typically by reducing harmful emissions or by using resources more intelligently. We are a bellwether investor in CleanTech private equity with two CleanTech funds of funds, one CleanTech direct investment fund and one CleanTech infrastructure fund under management. Our CleanTech investments have over 225 companies. Our funds are designed to generate both strong financial returns and a positive environmental impact.

IMPACT REPORT

Introduction

We face an unprecedented challenge today. Mankind's ever increasing demand for resources is placing an untenable burden on our planet. Global CO₂ emissions jumped by the largest amount on record in 2010.¹ This increase in emissions and demand for resources is driven by population growth, urbanization in developing nations and our increasingly connected global economy.

We must find and implement solutions to these problems. But these solutions must be easy to adopt and cost-effective; otherwise, the market will not embrace them.

The good news is that many such solutions already exist and cheaper, better solutions are moving from development into the mainstream right now. At North Sky Capital, we aim to provide growth capital to these companies. We invest in companies that have proven technology and existing customers. The growth capital we provide enables these companies to reach their full potential, meet market demand, have a profound impact on our environment, and create a good return for our investors.

Executive Summary

At North Sky Capital, we are committed to finding companies that will change the world. We provide growth capital to companies with the potential to produce strong returns and to reduce mankind's impact on the environment.

This report is the first in a series of reports that will highlight the beneficial impact of North Sky Capital's CleanTech investments. The environmental impact will be demonstrated within the context of:

- Reducing harmful emissions
- Intelligent resource utilization

Reducing Harmful Emissions

Reducing harmful emissions is critical to the global economy and societal well-being. Our investments are eliminating harmful emissions, as illustrated by the following data.



ENERGY EFFICIENCY

TAS Energy: Modular cooling and energy systems. Its products have eliminated 6.9 mm tons of CO₂.

Orion Energy: Efficient lighting systems. Customers have realized a reduction of 10 mm tons of CO₂.

Lighting Science Group: North America's largest producer of LED lightbulbs, each saving the equivalent of 280 kWh of electricity/year.

RENEWABLE ENERGY

Brightsource Energy: Large-scale solar thermal power. California projects expect to eliminate 2.5 mm tons of CO₂ annually.

FloDesign: New wind turbine design. Produces 2-3 times more energy than conventional turbines.

Nu Energy: Leading solar installer in Australia. Solar hot water units reduce emissions by 5.3 tons/year per home.

TRANSITION AWAY FROM OIL

Tesla Motors: Electric cars. Cuts CO₂ emissions by at least half compared to combustion engines.

Better Place: Charging infrastructure for EVs, making zero emission mobility a reality in Israel, Denmark and Australia.

POLLUTION REDUCTION

Cleaire: Diesel particulate filters to retrofit in-use engines. 85% particulate matter emission reduction.

Agility Fuel Systems: Natural gas fueling systems. Delivers 18-27% less emissions than traditional fuels.

TOXIC MATERIALS ELIMINATION

EcoSmart: Natural pesticides. No toxins.

FRX Polymers: Flame retardants for plastics that do not contain bromine, a toxic component of current retardants.

Intelligent Resource Utilization

Our natural resources are finite and we must take action to better utilize them. Our investments are doing this by improving efficiency, decreasing resources used and eliminating or recycling waste.

IMPROVING INDUSTRIAL EFFICIENCY

Synapsense: Data center energy management. Targets up to 50% energy savings and increased efficiency.

Aqwise: Wastewater treatment solutions that increase treatment capacity, reducing need to build new plants.

Aspen Aerogels: Aerogel-based insulation. 2-8x more effective than traditional materials.

IMPROVING BUILDING EFFICIENCY

Coolerado: Super-energy-efficient air conditioning. Up to 95% less energy required.

Hara: Software to reduce / optimize energy use. Customers typically reduce emissions by 15%.

SOLVING THE WATER SCARCITY PROBLEM

Seven Seas Water: Municipal water desalination, plus emergency response capability.

Pure Technologies: Water infrastructure management. Detection systems find an average of 2.2 leaks/mile.

TaKaDu: Water system monitoring software. The City of London is saving hundreds of megaliters of water per day.

REDUCING WASTE

Quench: Filtered water for offices and homes. Eliminates 35,000 tons of plastic bottle waste into landfills each year.

iGPS: 100% recyclable, plastic pallets. Eliminates 4.2 mm tons of wood pallet materials landfilled each year.

Point Loma Project: Waste-to-energy. Fuel cell uses methane gas, formerly flared or emitted into the atmosphere.

RECYCLING

ReCommunity: Largest pure-play recycling company in the U.S. Reduces emissions by 5.3 mm tons of CO₂, saves 2.6 mm yards³ of landfill/year.

eCullet: Recycled glass sorting. Every six tons of recycled glass reduces CO₂ emissions by one ton.

eCore: Recycles over 80 mm pounds of tire rubber per year, saving over 1 mm barrels of oil.



Reducing Harmful Emissions

At North Sky Capital, we are committed to finding great companies that will generate strong returns and make the world a better place. Reducing harmful emissions is critical to the global economy and societal well-being. Reducing emissions can be achieved in a variety of important ways, including:

- Energy efficiency
- Transition away from oil
- Toxic material elimination
- Renewable energy
- Pollution reduction

ENERGY EFFICIENCY

Energy efficiency is arguably the easiest, least costly and most effective way to reduce harmful emissions. Energy efficiency can save up to 20% of end-use energy consumption and costs substantially less than new supply resources.² The following three companies offer products and services that cut energy use and emissions.



Lighting Science Group LED bulbs

TAS Energy. TAS manufactures modular cooling and energy systems used in turbine air systems, packaged HVAC systems, geothermal power generation equipment and modular data centers. TAS pioneered turbine inlet chilling technology – this incrementally increases the efficiency of gas turbines by controlling temperature of air entering the turbine. Gas turbines lose efficiency and power in warm climates. Utilities have built thousands of “peaker” plants simply to account for potential overload on hot days. Instead of building more power plants that will spend the vast majority of their useful lives idle, operators can now install turbine inlet chilling systems on existing fleets.³

Across its product offerings, TAS systems offer 15% energy savings. The company tracks the amount of CO₂ eliminated through use of its products. As of February 2012, **Turbine Air Systems products have eliminated 6.9 million tons of CO₂.**⁴

Orion Energy Systems. Orion Energy offers energy efficient lighting systems, controls and services. The company helps its customers reduce energy consumption by up to 50%. In aggregate, its customers have realized a **carbon footprint reduction of 10 million tons of CO₂.**⁵ Orion's Intelite system helps customers reduce energy consumption through demand-response peak energy use and cost control management, utilization of supplemental ambient lighting,

motion controlled lighting and time-of-day lighting. Among its other offerings is Orion's exterior lighting technology. Of the 20 million parking lot lights in the U.S., only 4% utilize energy-efficient technology. Parking lot lights alone consume 22.2 billion kWh of electricity annually – this could be reduced by half through the use of Orion's technology and would decrease CO₂ emissions by nearly 7.3 million tons annually.”⁶

Lighting Science Group. Lighting Science Group is North America's largest producer of LED light bulbs. Lighting accounts for an estimated 20% of worldwide electricity usage.⁷ LEDs use dramatically less power than incandescent and compact-fluorescent lamp bulbs (CFLs). Notably, Lighting Science Group's LED bulbs, in contrast to CFLs, are mercury-free and 100% recyclable.⁸

Widespread adoption of LED lighting in the U.S. over the next 15 years could eliminate the need for 40 new power plants and reduce lighting electricity demand by 33%.⁹ Lighting Science is the first U.S.-based company to produce 2 million LED bulbs in a year. These **2 million bulbs will save \$34 million in electricity costs and over 280 million kilowatt hours over the course of a year.**¹⁰ This is equivalent to the annual greenhouse gas emissions from 38,000 passenger vehicles or CO₂ emissions from electricity use of over 24,000 homes.¹¹

RENEWABLE ENERGY

Renewable energy comes from natural resources including sunlight, wind, tides and geothermal heat. Energy from renewable sources is sustainable and imposes virtually no carbon footprint on the earth. Renewable sources provide vast amounts of energy – for example, the sun delivers more energy to earth in one hour than humanity uses in a year.¹² It is simply a question of harnessing this energy for human use. The following companies are doing just that.

BrightSource Energy. BrightSource Energy produces large-scale solar thermal power systems for utilities and industrial companies. The company's solar thermal technology generates power similar to traditional power plants by creating high-temperature steam to turn a turbine. Instead of fossil fuels to create the steam, BrightSource uses solar power.¹³ When constructed, BrightSource Energy's 2.6 gigawatts of contracts with PG&E and Southern California Edison are projected to **eliminate more than 2.5 million tons of CO₂ annually.**¹⁴ These contracts will also displace hundreds of tons of other emissions each year, including carbon monoxide, nitrogen oxides and volatile organic compounds.¹⁵

FloDesign. FloDesign has developed a revolutionary new wind turbine that produces **two to three times more energy versus conventional turbines** for an equivalent land area. The turbine is based on advanced aerodynamics and jet engine technology. It

captures energy from wind, using a novel mixer / ejector design. In addition, the FloDesign turbine has fewer moving parts than traditional turbines. This enables lower operations and maintenance costs and contributes to an overall lower cost of energy.¹⁶

Nu Energy. Nu Energy is a leading solar installer in Australia. The company provides solar power and solar hot water systems. Nu Energy has installed more than 18,000 solar systems throughout Australia in households, large industrial sites and government applications. Nu Energy's integrated solar electricity and solar hot water unit delivers up to 3kW of installed capacity, and offsets 50% of a household's total energy use. This is the equivalent of reducing emissions by 5.3 tons per year per household.¹⁷



BrightSource Energy's Solar Energy Development Center



Better Place charger and station

Over the past five years, United States electricity generation from renewables has increased while coal decreased. As this shift happens, electric vehicles become even cleaner. In California, renewables (13%) contribute more to the grid than coal (12%). Many Tesla owners around the world take emissions into their own hands. Increasingly, they rely exclusively on solar for their complete energy needs and in doing so, they tread more lightly on the planet. Some utility companies offer their customers the opportunity to buy energy generated exclusively from renewable sources. In both cases, Roadster owners lead a truly emission-free lifestyle.

TESLA MOTORS

TRANSITION AWAY FROM OIL

There is no question that oil is linked to vast amounts of harmful emissions each year. Gasoline-powered vehicles are a major contributor to carbon emissions in the developed world, accounting for 33 % of carbon emissions in the U.S., and as much as 50% of carbon emissions in some European countries.¹⁸ A transition to an electric transportation system based on renewable energy would result in a drastic reduction in oil demand. Sales of plug-in electric vehicles are expected to accelerate rapidly over the next several years, posting a compound annual growth rate of 43 % between 2011 and 2017.¹⁹

Tesla Motors. Tesla Motors sells electric cars and electric vehicle powertrains. The 2010 Tesla Roadster was the first ever mass-produced electric sports car.²⁰ Tesla will begin selling a premium sedan called the Model S in July 2012 and has agreed to launch (1) an electric car in collaboration with Mercedes-Benz, (2) a 2-seater car with Daimler AG and (3) a crossover SUV with Toyota. The benefits from Tesla will exponentially increase as new models are available for purchase. **Tesla vehicles reduce the amount of CO₂ emissions in half versus petroleum-burning rivals**, despite the fact that power for the Tesla cars are generated by the electricity grid, half of which is powered by coal in the U.S.²¹

Better Place. Better Place is building the charging infrastructure needed to accelerate the mass adoption of EVs. **Better Place provides the vehicles' batteries and electricity to users at a price well below current gas vehicle costs.** The company is deploying this infrastructure on a country-by-country basis, first in Israel, Denmark and Australia. In Israel, Better Place has partnered with Renault-Nissan to offer 100% emission free vehicles in concert with Better Place building the recharging network necessary to lead to mass adoption. The system offers customers total cost savings of up to 20% on annual automotive expenses, with zero emissions.²² Renault and Better Place have also announced a partnership in Australia to import zero-emission vehicles and build the necessary electric car charging network.²³ Most recently, Better Place unveiled the first of 20 battery switch stations to be installed across Denmark.²⁴



Tesla Model S

POLLUTION REDUCTION

Pollution is detrimental to animals and humans across the globe. While the extent of pollution's impact may vary, it is clear that pollution negatively affects quality of life and in extreme cases is a contributor to disease and death, especially in developing countries. The following companies help make the air we breathe cleaner, and the environment we live in safer for future generations.

Cleaire. Cleaire is the market-leading manufacturer of retro-fit diesel particulate filters for diesel vehicles, including trucks and mining equipment. Cleaire's products replace a diesel vehicle's muffler and reduce emissions and noise levels. The company's products fit nearly all on-road and off-road engines in the market today. Diesel exhaust, particularly diesel particulate matter, is a major contributor to air pollution worldwide. Cleaire's products **reduce particulate matter emissions by over 85%.**²⁵ In order to meet global demand, the company is operating at maximum capacity and has plans to expand.

Agility Fuel Systems. Agility manufactures on-vehicle fuelling systems for natural gas powered heavy trucks and buses. Agility Fuel Systems has delivered over 7,500 natural gas fuel systems to fleet customers, dealers and major OEMs switching from traditional gasoline vehicles.²⁶ Even compared to the best-case diesel scenario, natural gas delivers substantial environmental benefits by **reducing emissions by 18- 27%.** Natural gas systems also offer substantial cost savings compared to gasoline or diesel powered vehicles.²⁷



EcoSmart natural pest control product

TOXIC MATERIAL ELIMINATION

Toxic materials pose an imminent health threat across the globe. Many innovative companies are commercializing ways (1) to replace toxic chemicals with non-toxic equivalents or (2) to eliminate the need for toxic chemicals entirely.

EcoSmart. Ecosmart develops and markets natural pesticides derived from botanical oils. Products include wasp & hornet killer, insect repellent, bed bug killer, garden fungicide, mosquito fogger, home pest control and mosquito & tick control. EcoSmart offers the only complete line of EPA exempt pesticides sold in the U.S.²⁸ EcoSMART's patented technology is based on the natural defenses that plants and trees use for self protection against insects and pathogens. EcoSMART's products work by naturally repelling insects. The result is a product that is distasteful to insects but completely benign to humans and animals. For example, peppermint oil repels mosquitos, yet is commonly ingested (and enjoyed) by humans.

FRX Polymers. FRX Polymers manufactures nontoxic flame retardants for plastics and other common materials. Plastic and household furnishings commonly contain bromine as a flame-retardant. Bromine is believed to be toxic and poses a danger to humans and the environment. Some European countries have banned brominated chemicals as a result.²⁹ FRX is rapidly scaling up its production capability to meet demand from customers globally.

Intelligent Resource Utilization

Our natural resources are finite and we must take action to better utilize them. We are finding smart ways to make industrial processes more efficient, decrease the amount of precious resources used in our everyday lives and reduce, eliminate or recycle waste. This can be achieved by a variety of methods, including:

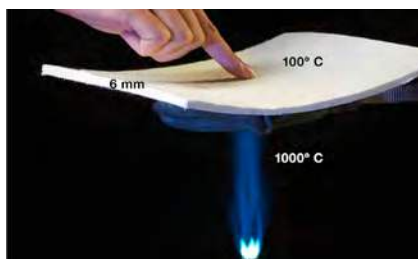
- Improving industrial efficiency
- Solving the water scarcity problem
- Recycling
- Improving building efficiency
- Reducing waste

IMPROVING INDUSTRIAL EFFICIENCY

Finding ways to reduce the amount of electricity, fuel and/or raw materials used by manufacturers, utilities and others to produce goods or services is essential if we are to be good stewards of our planet. The following companies are improving industrial efficiency:



Aqwise wastewater pellets



Aspen Aerogel insulation – blow torch on one side, human touch on the other

SynapSense. SynapSense provides energy management sensors and tools to computer data centers. Data centers currently account for 2% of all electricity used in the U.S. and 1.3% of worldwide electricity utilization.³⁰ SynapSense's tools enable real-time collection of precise temperature data and the direction of the optimal amounts of cooling power to zones within each data center. These tools provide **up to 50% energy savings and increased efficiency** by continuously aligning cooling capacity with changes in IT load throughout a data center.

Aqwise. Aqwise is a leader in innovative wastewater treatment solutions for the industrial, agricultural and municipal markets. Aqwise's technology utilizes coated plastic pellets engineered to maximize surface area of each pellet. Adding these pellets, screens and air bubble systems to a treatment plant solves two main problems for existing treatment plants: (1) rapid urbanization and growing populations worldwide often cause unforeseen growth in

the quantities of wastewater to be treated by existing municipal facilities³¹ and (2) increasingly stringent effluent standards require industrial, agricultural and municipal plants to remove pollutants which were not necessarily considered in the original plant design.³²

Aqwise's process allows treatment plants to costeffectively increase treatment capacity and upgrade effluent quality with very minor adjustments to existing facilities.³³

Aspen Aerogels. Aspen Aerogels manufactures nanotechnology materials for thermal management and energy conservation. Aerogels are the world's lowest density solids and consist of 3% silica and 97% air. Using its proprietary aerogel technology, Aspen offers extraordinarily efficient, thin and flexible insulation products that are easy to install. Primary uses are pipe insulation and building insulation. Aspen's products provide 2-8x more thermal and acoustical insulating power than traditional insulation. Due to high market demand, the company recently doubled its manufacturing capacity.

IMPROVING BUILDING EFFICIENCY

Commercial and residential buildings consume approximately 70% of global electricity and 40% of primary energy.³⁴ This market represents a huge opportunity for energy savings through intelligent resource utilization. The following companies offer building owners actionable solutions to improve efficiency.

Coolerado. Coolerado manufactures a super-energy efficient central air conditioning system for light commercial and residential use. Its products **use up to 95% less electrical energy than traditional AC systems.**³⁵ Coolerado's technology represents the first major innovation to the AC marketplace in nearly 100 years. The Department of Energy recognized Coolerado's significant role in reducing energy demand: "air-conditioning is a major contributor to summer peak electrical demands. Because Coolerado's technology significantly reduces electric demand for cooling, it can provide energy and cost savings and help Federal energy managers meet [their] energy-reduction goals."³⁶ Coolerado units have already been installed in 26 countries to a diversified customer base, including Walmart, Staples, the U.S. Postal Service and restaurant chain Sweet Tomato.³⁷

Hara Software. Hara has created an enterprise software tool that measures the size and makeup of each customer's energy usage and then builds a roadmap to achieve energy savings and cost reductions. Hara's software enables organizations to model and predict the impact of energy optimization projects and track ongoing efficiency improvements. Hara customers include: Aflac, Avaya, City of Las Vegas, Dell, eBay, HP, Hasbro, Intuit, News Corporation, NVIDIA and Safeway.³⁸ Avaya and Intuit have set goals to **reduce carbon emissions by 15% by 2015 and 2012, respectively, using Hara software.** For Intuit alone, this will equate to a reduction of over 15,000 tons of CO₂.³⁹

A Testament to "Free Cooling"

When it comes to being "green", Green House Data in Cheyenne, Wyoming lives up to its name. The data center began its business in 2008 with the mission to build a super-energy-efficient client server and data storage system. Powered by 100% wind energy, Green House Data also takes advantage of "free cooling". Using the Coolerado M50 air conditioners allows them to turn off the cooling portion of the units and pull in ambient air during the "shoulder" season – when the air outside is cooler than it is inside. In two years of operation using Coolerado air conditioners, they've seen their cooling bill decrease by 90% and have experienced an overall total energy reduction in the data center by 40%.

COOLERADO / GREEN HOUSE DATA



Coolerado air conditioning system

In terms of its economic value and the fact that there is no replacement for it, [water's] value is greater than oil. Our mis-pricing of water leads to an increasingly vulnerable water infrastructure that doesn't just waste water and energy. It also risks our future ability to support large metropolitan centers, all of which depend on an adequate water supply.

TAKADU



Pure Technologies leak detection services are being used to clean, inspect, assess and rehabilitate the wastewater system in Abu Dhabi

SOLVING THE WATER SCARCITY PROBLEM

The crisis of water scarcity is rampant across the globe. By 2025, the United Nations' food agency estimates that 1.8 billion people will live in regions with absolute water scarcity and two-thirds of the world population will be under conditions of "water stress," defined as the threshold for meeting the water requirements for agriculture.⁴⁰ North Sky Capital's investments in water-related companies touch a number of important subsectors. Three companies making an impact in water re-use and water savings are described here.

Seven Seas Water. Seven Seas designs, builds and operates water and wastewater treatment plants in the Caribbean and the Americas. The company provides potable water from seawater to large volume customers. Seven Seas also has an ability to quickly address water needs in emergency situations – those in need of water for immediate or short-term challenges. Seven Seas Water maintains a fleet of high-efficiency, containerized reverse osmosis units that can be deployed for construction, desalination equipment maintenance, or catastrophic weather events.⁴¹

In one example, the Virgin Islands Water and Power Authority was experiencing challenges meeting the water demands on the island of St. Croix. Within a record-breaking 92 days from the date the agreement was signed, six sets of mobile seawater reverse osmosis units were shipped to the site, installed and began producing **1,500,000 gallons of potable water per day.**⁴²

TaKaDu. TaKaDu is a leader in water network monitoring and provides a Software-as-a-Service solution for monitoring water distribution networks. Water loss reduction is the cheapest way to increase water supply.⁴³ 25-30% of transported water is lost, primarily through leaks and burst pipes.⁴⁴ TaKaDu detects alerts and provides real-time data on leaks, bursts, zone breaches and other network inefficiencies.⁴⁵

TaKaDu's technology is based on complex algorithms used to analyze existing online data from meters within a network (flow, pressure, etc) and external data (weather, holidays, etc). The result is more efficient operations – such as reduced repair and detection costs, burst prevention and damage reduction – and most importantly, reduced water loss.⁴⁶ TaKaDu was started in Israel and operates worldwide – from the U.K. to Australia to Chile.⁴⁷ The City of London, for instance, saves hundreds of megaliters of water per day using TaKaDu's monitoring services.⁴⁸

Pure Technologies. Pure Technologies is a provider of critical water infrastructure management tools involved in the evaluation of water pipelines. With 12 billion gallons of water lost per day globally, water utilities are faced with the need to proactively address leakage and the risk of pipeline ruptures. Pure's technical services include inspection, leak detection and condition assessment. The company has inspected thousands of miles of pipeline. **Pure's pipeline leak detection systems have found an average of 2.2 leaks per mile** in large diameter water pipelines in North America.⁴⁹

REDUCING WASTE

We have an obligation to reduce our impact on the world we live in. Unfortunately, the opposite is occurring – the increasing global population has led to an increase in waste produced. In the U.S. alone, 229 million tons of waste is generated annually which equates to 4.4 pounds of garbage per person per day.⁵⁰ The following companies offer alternative products and technologies that reduce waste.

Quench. Quench markets and distributes “bottleless” filtered water coolers for homes and offices for less than the cost of bottled water. Each year the bottled water cooler business consumes 140 million kilowatt hours of electricity, wastes 2.7 billion gallons of water, burns close to 6 million gallons of fuel in delivery trucks and dumps more than 35,000 tons of waste into landfills. Quench’s on-site filtration coolers eliminate this waste. Quench’s customers include FedEx, Best Buy, GE, Frito Lay, Coca-Cola and the Home Depot.

iGPS. iGPS produces recyclable RFID-equipped plastic pallets. iGPS pallets are 100% recyclable. If a pallet is broken, it is molded into a new pallet, resulting in indefinite useful life. In contrast, approximately **4.2 million tons of wood pallet materials are landfilled** in the U.S. per year.⁵¹ This equals 1.4% of total waste and 19.6% of total wood waste deposited at landfills.⁵² Wood pallets have been a major factor in deforestation: Nearly 40% of all hard wood harvested in the U.S. is for pallets, about two-thirds of which are limited use, one-way pallets.⁵³ Over the past 150 years, deforestation has contributed an estimated 30% of the atmospheric build-up of CO₂.⁵⁴

In addition, iGPS pallets are 35% lighter than typical wood pallets. Replacing all wood pallets with iGPS plastic pallets would remove 9.25 billion pounds of unnecessary weight from the nation’s supply chain, resulting in fuel savings.

Point Loma Integrated Fuel Cell System.

The Point Loma Integrated Fuel Cell System is a renewable energy infrastructure investment made by North Sky Capital in 2010. The Point Loma Wastewater Treatment Plant treats approximately **175 million gallons of wastewater per day.**

North Sky provided capital to construct a system that captures untreated methane gas from the plant under a long-term feedstock agreement with San Diego. The gas is then cleaned and upgraded into pipeline-quality natural gas and distributed as renewable biogas via a nearby natural gas pipeline to University of California San Diego and the South Bay Municipality where it is converted by fuel cells into 4.2MW of electricity. Prior to this project, the methane gas from the plant was exhausted into the atmosphere or flared on site.



Collection of methane gas at Point Loma Wastewater Treatment Plant



Nike Grind program recycles worn athletic shoes to create Training Ground

RECYCLING

Recycling and reuse are becoming increasingly important as landfills are filling up quickly and global population growth creates more waste each year. Recycling and reuse preserves natural resources and reduces energy demand. The following companies are leaders in recycling and reuse:

ReCommunity Recycling. ReCommunity is the largest pure-play recycling company in the U.S. with 35 facilities. The materials recovered by ReCommunity **annually reduce CO₂ emissions by 5.8 million tons, save 2.6 million cubic yards of landfill space** and avoid 17.6 million gallons of waste water from landfills.⁵⁵ Single-stream recycling is among ReCommunity's key initiatives. Single-stream recycling enables customers to deposit all recycled materials into just one bin without the need to sort the waste. Towns typically increase recycling tonnage by 25-60% by implementing single-stream initiatives, which diverts volume from landfills and saves \$94/ton in disposal fees.⁵⁶

eCullet. eCullet has developed an optical sorting process that allows more efficient extraction of recyclables from municipal waste. Specifically, eCullet uses its proprietary optical sorting technology to sort glass by color. This recycled single-color cullet glass is then used for new glass production. Energy costs drop about 15-25% when recycled glass is used in the glassmaking process. **For every six tons of cullet used, carbon dioxide emissions are reduced by one ton,** electricity and natural gas use is reduced by 2.5% and furnace temperature is reduced by 6° C.⁵⁷

Ecore International. Ecore is North America's largest user of recycled tire rubber. Ecore established the recycled rubber flooring category over 20 years ago.

The company **processes more than 80 million pounds of scrap tire rubber each year,** helping to conserve more than one million barrels of oil by converting pliable treads into products for the construction, consumer, sports and leisure, commercial and industrial markets.⁵⁸ Products include carpeting, commercial flooring, playground mats, fitness center mats, artificial field turf, sound abatement layers for walls and floors, sidewalk pavers, and rubber mats for load securements in rail cars and trucks.

Conclusion

It is important to consider the aforementioned statistics in broader context.

- Each year, 6 bn tons of CO₂ are emitted into the atmosphere from human activity⁵⁹
- 6 twenty-five year old pine trees absorb 1 ton of CO₂⁶⁰
- On average, one broad leaf tree will absorb 1 ton of CO₂ during its full life-time (approximately 100 years)⁶¹

At North Sky Capital, we are committed to having a positive impact on the world in which we all live. Join us.

For more information, please contact us or visit www.northskycapital.com.

Endnotes

- ¹ www.nytimes.com/2011/12/05/science/earth/record-jump-in-emissions-in-2010-study-finds.html?_r=2&ref=global-home
- ² www.epa.gov/cleanenergy/documents/suca/ee_and_carbon.pdf
- ³ <http://www.tas.com/energy-efficiency/turbine-air-systems/turbineinlet-chilling-overview.html>
- ⁴ www.tas.com
- ⁵ www.oesx.com
- ⁶ www.sesorian.com/?q=content/orion-energy-systems%20E2%80%99-exterior-lighting-wins-gold-plant-engineering-awards
- ⁷ www.stateofgreen.com/Technologies/Lighting?sector=Energy-Efficiency
- ⁸ www.prnewswire.com/news-releases/lighting-science-group-becomes-north-americas-largest-producer-of-led-light-bulbs-137955848.html
- ⁹ www.energystar.gov/index.cfm?c=lighting.pr_what_are#what_are
- ¹⁰ <http://www.prnewswire.com/news-releases/lighting-science-groups-ceo-asks-congress-not-to-roll-back-light-bulb-energy-efficiency-standards-125343408.html>
- ¹¹ <http://www.prnewswire.com/news-releases/lighting-science-groups-ceo-asks-congress-not-to-roll-back-light-bulb-energy-efficiency-standards-125343408.html>
- ¹² University of Minnesota, Leuthold Weeden, Matthias Loster and North Sky Capital research.
- ¹³ www.brightsourceenergy.com/about_us
- ¹⁴ http://brightsourceenergy.com/about_us/environmental_stewardship
- ¹⁵ http://brightsourceenergy.com/about_us/environmental_stewardship
- ¹⁶ North Sky Capital
- ¹⁷ http://www.solardaily.com/reports/Nu_Energy_Launches_The_Sleek_New_Solarcombined_System_999.html
- ¹⁸ www.betterplace.com/the-opportunity-environment
- ¹⁹ Pike Research provided by the Auto Channel: <http://www.theautochannel.com/news/2011/09/23/008105-electricvehicle-penetration-rates-to-be-highest-smaller-statesforecasts.html>
- ²⁰ www.motorauthority.com/news/1044161_the-worlds-only-electricsports-car-2010-tesla-roadster
- ²¹ www.teslamotors.com
- ²² <http://www.betterplace.com/the-company-pressroompressreleasesdetail/index/id/Better%20Place%20introduces%20the%20first%20mass%20market>
- ²³ <http://www.betterplace.com/the-company-pressroompressreleasesdetail/index/id/Better%20Place%20and%20Renault%20today%20announced%20a%20strategic%20partnership%20in%20Australia>
- ²⁴ <http://www.betterplace.com/the-company-pressroompressreleasesdetail/index/id/Better%20Place%20Unveils%20Europe's%20First%20Battery%20Switch%20Station%20in%20Denmark>
- ²⁵ <http://www.cleaire.com/reference/downloads/marketing/DPFMyths.pdf>
- ²⁶ www.agilityfuelsystems.com/about_us.htm
- ²⁷ www.natgasamerica.com/Michael_Gallagher_Westport_Innovations/s1325/
- ²⁸ www.ecosmart.com/products
- ²⁹ Kim Hooper, Jianwen She (2003). "Lessons from the Polybrominated Diphenyl Ethers (PBDEs): Precautionary Principle, Primary Prevention, and the Value of Community-Based Body-Burden Monitoring Using Breast Milk," Environmental Health Perspectives, v111
- ³⁰ Worldwide Electricity Used in Data Centers by Jonathan Koomey, Stanford University, 2011.
- ³¹ www.aqwise.com
- ³² www.aqwise.com
- ³³ www.aqwise.com
- ³⁴ Embracing Energy Efficiency: The Fastest Road to Energy Security. The CleanTech Group. 2010.
- ³⁵ www.coolerado.com/
- ³⁶ www1.eere.energy.gov/femp/pdfs/tir_coolerado.pdf
- ³⁷ www.coolerado.com/news/inc-magazine-unveils-its-annual-exclusivelist-of-americas-fastest-growing-private-companies-the-inc-5005000/
- ³⁸ www.hara.com
- ³⁹ http://about.intuit.com/about_intuit/philanthropy/environmental_impact.jsp
- ⁴⁰ Food & Agriculture Organization of the United Nations
- ⁴¹ www.sevenseswater.com/markets-we-serve/emergency-and-remotesites/
- ⁴² www.sevenseswater.com/1-5-million-gallons-per-day-delivered-in-92-days/
- ⁴³ www.takadu.com
- ⁴⁴ <http://news.charlesayoub.com/index.php/article/12658/World%20news%20Headlines:%20Israeli%20startup%20Takadu%20helps%20Londoners%20save%20water>
- ⁴⁵ www.takadu.com/
- ⁴⁶ www.takadu.com
- ⁴⁷ www.takadu.com/category/AboutUs
- ⁴⁸ http://www.mfa.gov.il/MFA/InnovativeIsrael/TaKaDu_software_keeps_water_flowing-March_2011.htm
- ⁴⁹ www.puretechltd.com
- ⁵⁰ www.co.contra costa.ca.us/depart/cd/recycle/reduce.htm
- ⁵¹ www.igps.net/advantage/sustainability.php
- ⁵² www.igps.net/advantage/sustainability.php
- ⁵³ www.igps.net/advantage/sustainability.php
- ⁵⁴ www.igps.net/advantage/sustainability.php
- ⁵⁵ www.recommunity.com/ReCommunityFactSheet_20120103.pdf
- ⁵⁶ www.recommunity.com/ReCommunityFactSheet_20120103.pdf
- ⁵⁷ www.ecullet.com/home.html
- ⁵⁸ www.ecoreintl.com
- ⁵⁹ http://see-the-sea.org/topics/pollution/air/manmade/man_made_global_warming.htm or http://www.geocraft.com/WVFossils/ice_ages.html
- ⁶⁰ <http://erasescarbonfootprint.com>
- ⁶¹ www.carbonfootprint.com/plantingtrees.html

Information contained in this publication is based on data obtained from sources we deem to be reliable; however, it is not guaranteed as to accuracy and does not purport to be complete. Nothing contained in this publication is intended to be a recommendation of a specific security or company nor is any of the information contained herein intended to constitute an analysis of any company or security reasonably sufficient to form the basis for any investment decision.

These materials are not intended as an offer to sell, or the solicitation of an offer to purchase, any security. Any offering will be made only by means of a private placement memorandum or other appropriate materials (the "Offering Documents") that will contain detailed information about any investment to be offered; no sales will be made, and no commitments to enter into investments will be accepted, and no money is being solicited or will be accepted, until the Offering Documents are made available to prospective investors.

North Sky Capital, LLC © 2012

North Sky

CAPITAL

33 South Sixth Street
Suite 4646
Minneapolis, Minnesota 55402

Main 612 435 7150
Fax 612 435 7151

northskycapital.com