



2.8 BILLION

people rely on wood, charcoal, dung and coal for cooking and heating and use very inefficient cooking facilities which results in health issues and premature death.

> Source: United Nations - Sustainable Development Goals

Those who appreciate the responsibility and privilege they have been given by God should be prepared to embark on the path of responsibility for the world we live in and pledge accountability for its welfare to look after, protect and improve the quality of life for everyone.

SHEIKH ZAYED BIN SULTAN AL NAHYAN

The late president and founding father of the United Arab Emirates 1918 – 2004



DELIVERING A SUSTAINABLE FUTURE FOR ALL

In 2008, the Zayed Future Energy Prize was established to act as a springboard for partnerships and innovations that will help solve our most pressing global energy and sustainability challenges. This mission continues to gather momentum by recognising those pioneers that are at the forefront of the transition to a more energy secure and sustainable world.

Today, the impact of the prize continues to grow. Now in its 9th cycle, more than 289 million people have had their lives positively influenced by the prize's international community of winners. These winners have enabled modern energy access in rural African villages, helped illuminate hard-toreach communities in South East Asia, provided mechanisms for harnessing clean energy sources in Europe, and developed innovative transport and grid-connection solutions in the MENA region.

Through the Zayed Future Energy Prize, the UAE is recognising those visionaries that dare to push the boundaries of what is achievable through clean energy innovation.

This year, we celebrated another milestone for the prize. Since its inception, we have now received over 10,000 nominations and submissions from more than 100 countries. In 2016 alone, we received a record 1,678 entries from 103 different nations, a 22% increase on our previous record year.

In 2012, the UAE leadership launched the Global High Schools category as part of a commitment to the Sustainable Energy for All (SE4All) initiative and educating future generations about sustainability. Entering its tenth year, the prize has empowered 24 schools to incorporate renewable energy and sustainability into their buildings and curricula. By empowering future generations to think sustainably, we are also empowering tomorrow's leaders to act sustainably.

A sustainable future can only be achieved by unlocking the potential in all aspects of society. The Zayed Future Energy Prize acts as a spark for this shared responsibility and collective action. It is a platform that affords others the means to take their sustainable message further – impacting the way communities, governments, and businesses see the future of our planet.

Our journey with the prize began with the foresight of the late founding father of the UAE, Sheikh Zayed Bin Sultan Al Nahyan. It continues today through the long-term vision of our leadership and through the tangible impact that the Zayed Future Energy Prize is inspiring across the world.



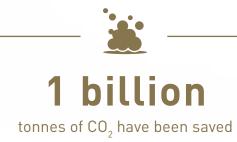
DR. SULTAN AHMED AL JABER Director-General of The Zayed Future Energy Prize

ZAYED FUTURE ENERGY PRIZE

Named after the founding father of the United Arab Emirates, Sheikh Zayed bin Sultan Al Nahyan, the Zayed Future Energy Prize was established in 2008 to recognise and reward those whose innovations help achieve the changes needed to secure a sustainable future for the planet and improve the quality of life of its inhabitants.

Through the prize winners,1 billion tonnes of CO, have been saved, 450 million MWh have been produced through renewable energy, 626 million MWh saved through greater efficiency and 330 million kWh generated by solar lanterns.

For the 9th edition of the prize, these figures had grown to 1,678 nominations and submissions from over 100 countries worldwide. Over 289 million people worldwide have seen tangible improvements in their lives because of the prize winners through greater access to safe and renewable energy, cleaner drinking water, and increased energy efficiency.

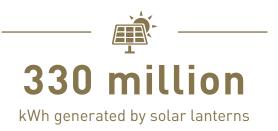


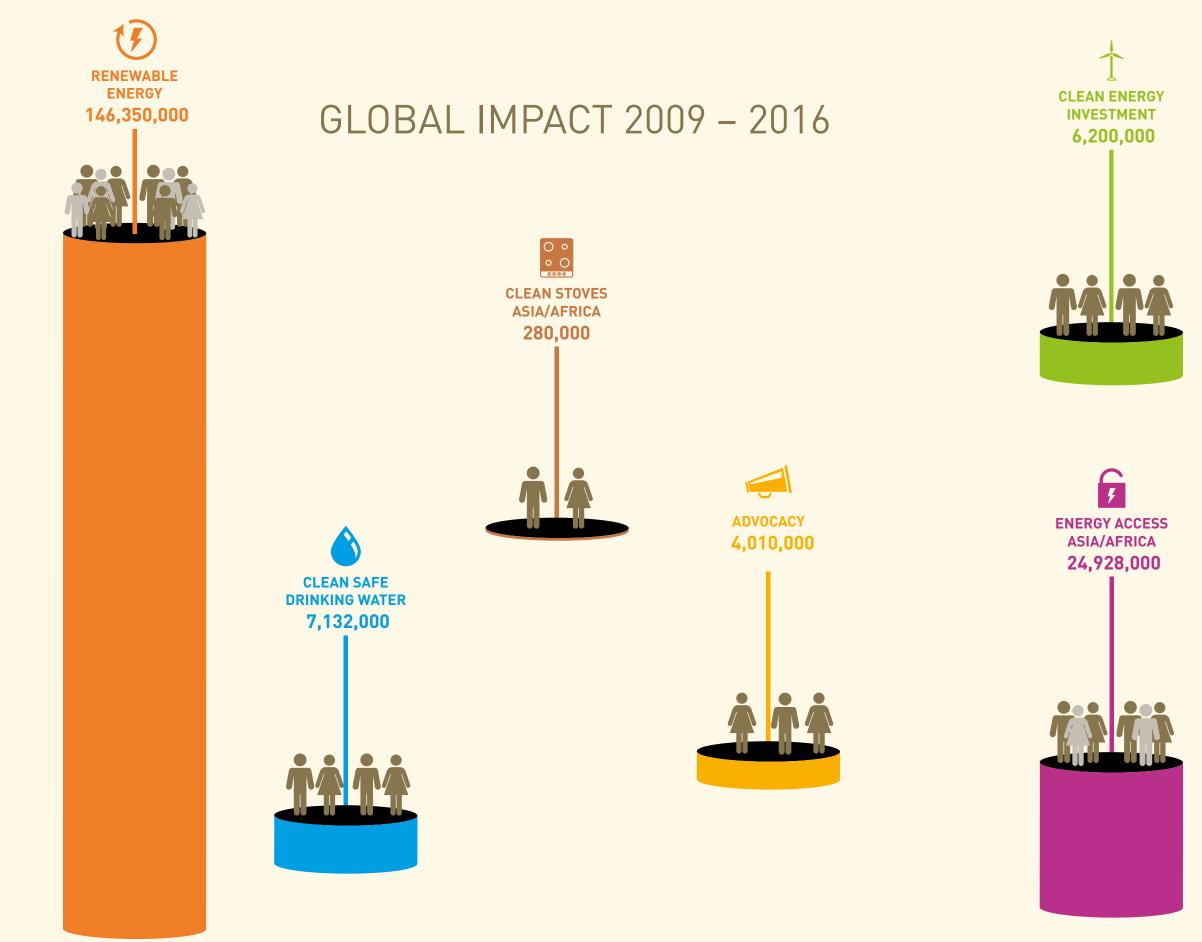


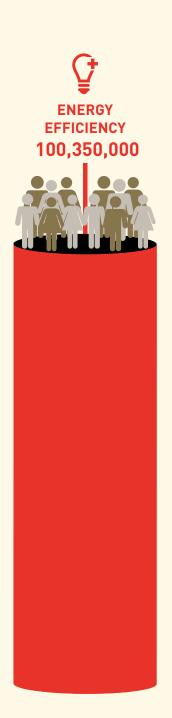


MWh have been produced through renewable energy









289,250,000 PEOPLE

BENEFITTED IN THE WORLD FROM 2009 - 2016



CLEAN STOVES – ASIA / AFRICA



ADVOCACY



CLEAN ENERGY INVESTMENT



ENERGY ACCESS – ASIA / AFRICA

RENEWABLE ENERGY



Since 2013, 2,037 students from 18 countries have been involved in award-winning projects.



1,685 tonnes

of CO₂ emissions have been reduced as a result of the projects of the Global High Schools category winners since 2013.

REWARDING INNOVATORS

The prize empowers innovators in renewable energy and sustainability across five categories: Large Corporations, Small and Medium Enterprises, Non-Profit Organisations, Lifetime Achievement, and Global High Schools, where one regional award is given to a high-school in each of the five regions: the Americas, Africa, Europe, Asia and Oceania.

The Large Corporations category is a recognition award that helps businesses across the world continue to place sustainability at the heart of everything they do. By encouraging innovations at every level of business, from SMEs to multi-nationals, the prize is ensuring that sustainability, clean energy, and environmental action take their place at the center of a business ethos. By empowering non-profit organisations alongside this, the prize cultivates a growing community of people and businesses helping to shape the communities of tomorrow.

Established in 2012, the Global High Schools category helps inspire young people to take action and impact the world around them in a sustainable way. By calling for schools to think sustainably and submit a project that they wish to implement, the prize is playing an active role in helping those that will shape the world of tomorrow become involved and engaged in sustainability at a younger age. In doing so, they will carry this message forward in their future lives.

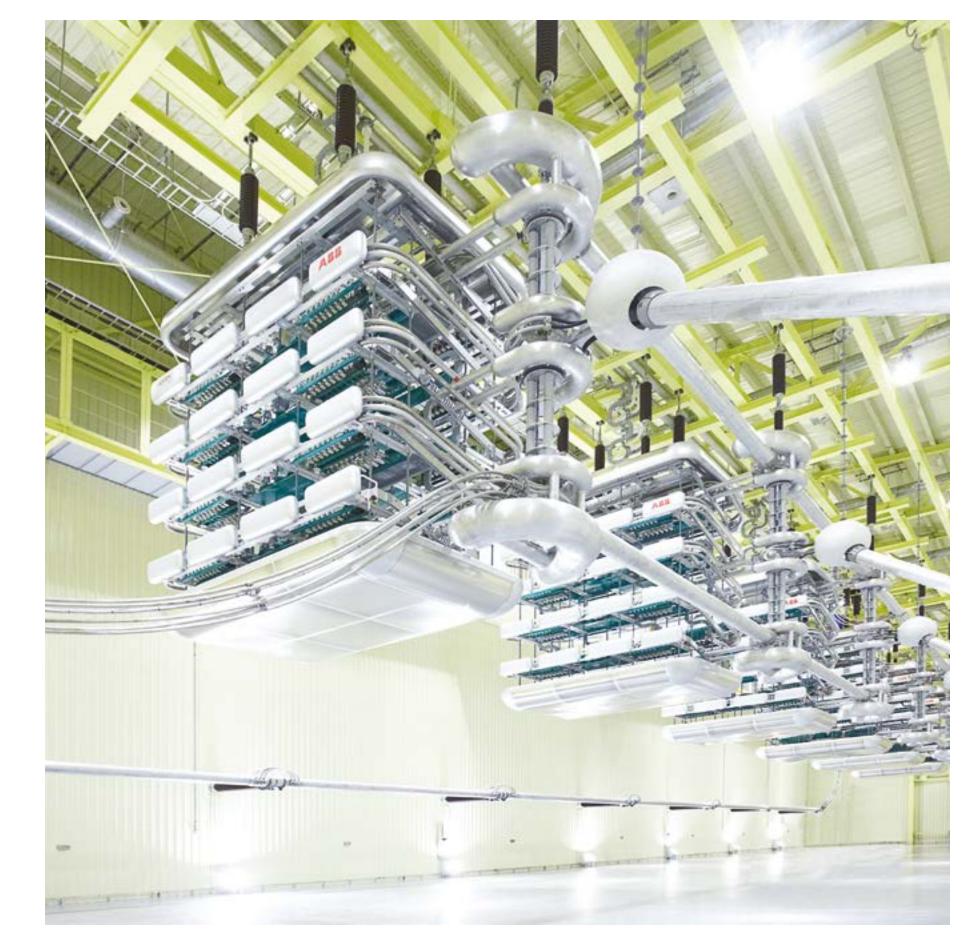


HARNESSING THE POWER OF NATURE SECURE ENERGY FOR A CLEAN ENVIRONMENT

Previous winners include Toyota, the world's largest car manufacturing company, which launched its Prius hybrid vehicle in 1997, and Vestas, the world leader in wind turbine technology, striving to establish wind as a reliable and viable alternative to fossil fuels. In total, large corporations have succeeded in reducing CO₂ emissions by over 950 million tonnes.

Previous winners

2010 Toyota Motor Corporation - Japan Suntech Power Holdings (Runner-up) – China 2011 Vestas - Denmark 2012 Schneider Electric - France 2013 Siemens LLC - Germany 2014 ABB - Switzerland 2015 Panasonic – Japan 2016 BYD - China



A BRIGHT FUTURE

Far too many students across the developing world face a difficult choice; neglect their health or neglect their studies. Why? because the only light they have access to is a dangerous and unhealthy kerosene lamp. Now, ten million children have access to clean solar-powered light thanks to robust and sustainable innovations implemented by the prize-winning Small and Medium Enterprises. This is just one way that SME innovators are helping to improve the lives of others across the world.

Previous winners

2010

International Development Enterprises (Runner-up) – India 2011 E+Co (Runner-up) - USA 2012 CDP - UK Orb Energy (Runner-up) - India 2013 d.light design – USA 2014 Abellon CleanEnergy - India 2015 M-KOPA Solar – Kenya 2016 Off Grid Electric - Tanzania



CASE STUDY OFF GRID ELECTRIC SMALL AND MEDIUM ENTERPRISE

Off Grid Electric provides solar power services to off-the-grid customers, offering end-to-end solutions that overcome the typical barriers to solar adoption in frontier markets.

The SME establishes direct lifetime relationships with their customers and offers a ten-year solar leasing model with free ongoing service. They also allow customers to upgrade their systems without having to buy a new product.

Because their solar home systems are cheaper than the kerosene or diesel alternatives, they are able to provide access to clean electricity for over 50,000 people. This allows a household to save, after installation, up to \$15.50 per month on lighting and mobile phone charging bills, and reduces carbon emissions by 140 kg of CO_2 and 1.45 kg of black carbon per household per year.

As the winner of the 2016 Zayed Future Energy Prize – SME, Off Grid Electric expanded its reach. They now serve populations in Tanzania and Rwanda, and are working to further expand. Their partnership with the government of Tanzania means they will soon be able to reach one million homes and help create 15,000 jobs locally.



DOING THE GROUND WORK

The lives of millions of people and thousands of communities across the world are often shaped by the grassroots work of non-profit organisations (NPOs) and non-governmental organisations (NGOs). These organisations, not only empower hard-to-reach communities but also influence the sustainable actions of government, business and the general public. These organisations demonstrate their commitment to a sustainable future by helping to provide improved standards of living and quality of life, secure livelihoods, access to education and long-term independence through community-based facilities that give them the tools to create their own sustainability journey.

Previous winners

2012 Environmental Defense Fund (Runner-up) - USA 2013 Ceres – USA 2014 Fraunhofer Institute for Solar Energy Systems - Germany 2015 Liter of Light – Philippines 2016 Kopernik - Indonesia



CASE STUDY KOPERNIK NON-PROFIT ORGANISATION

Kopernik delivers sustainable energy technologies to "last-mile" communities, thereby helping to reduce poverty. The organisation has reached over 370,000 people and distributed over 90,000 units of clean energy technologies across 26 countries. Since it was founded, Kopernik has learned how to promote clean energy products to "base of the pyramid" markets by building trust and commitment and overcoming financial barriers.

Kopernik's Wonder Women initiative provides access to clean energy technologies for people in remote villages in Indonesia. By training women to become micro-social entrepreneurs through the sale of clean energy products, the project helped empower more than 550 women, thus connecting 85,000 people to clean energy technologies.

Winning the prize in January 2016 allowed Kopernik to expand its technology distribution programme to five new locations in Indonesia, making clean energy technologies available to more people. Kopernik also expanded their reach by providing access to agricultural processing tools for smallholder farmers who do not have the technology to add value to their produce.

ANPA ALKOHOL



THE GAME CHANGERS

Those considered for the Lifetime Achievement award are remarkable the planet and positively affected the lives of millions of people worldwide through their long-term vision and leadership in the field of renewable energy and sustainability. To date, winners have shaping policy, whose influence is set to last long into the future.



2009 DIPAL BARUA Founding Managing Director, Grameen Shakti Founder and Chairman, Bright Green Energy Foundation



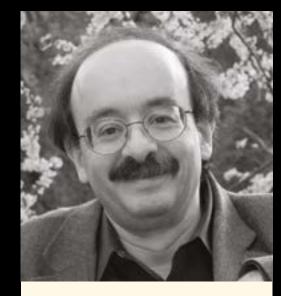
2012 DR. ASHOK GADGIL Director, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory



2014 WANG CHUANFU Founder, Chairman, Executive Director and President, BYD Co Ltd



2009 DR. MARTIN GREEN Professor, The University of New South Wales



2011 AMORY B. LOVINS Co-founder and Chief Scientist, Rocky Mountain Institute

2013

Professor,

DR. JOSE GOLDEMBERG

The University of Sao Paulo



2015 AL GORE Co-founder and Chairman, Generation Investment Management

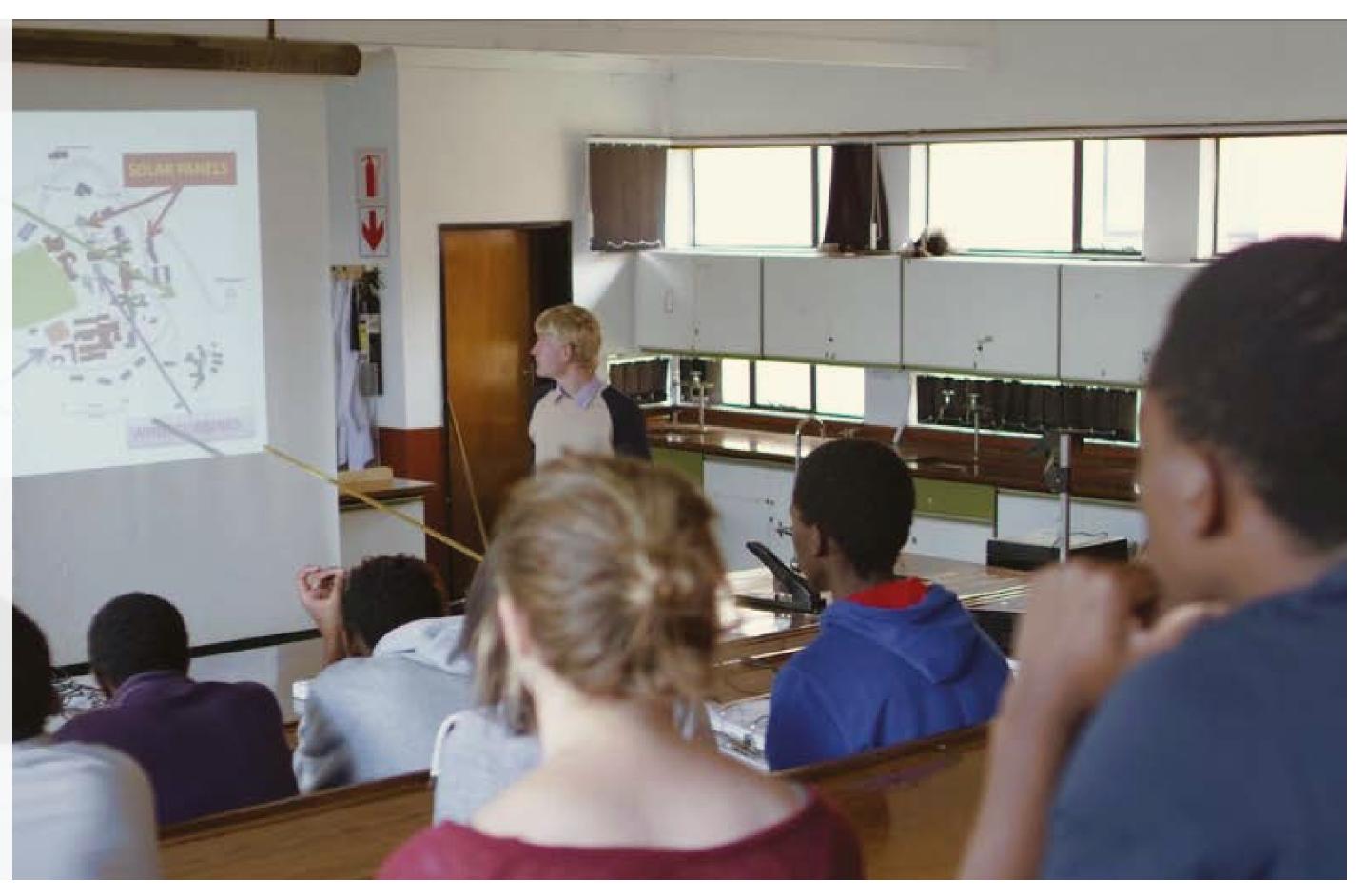


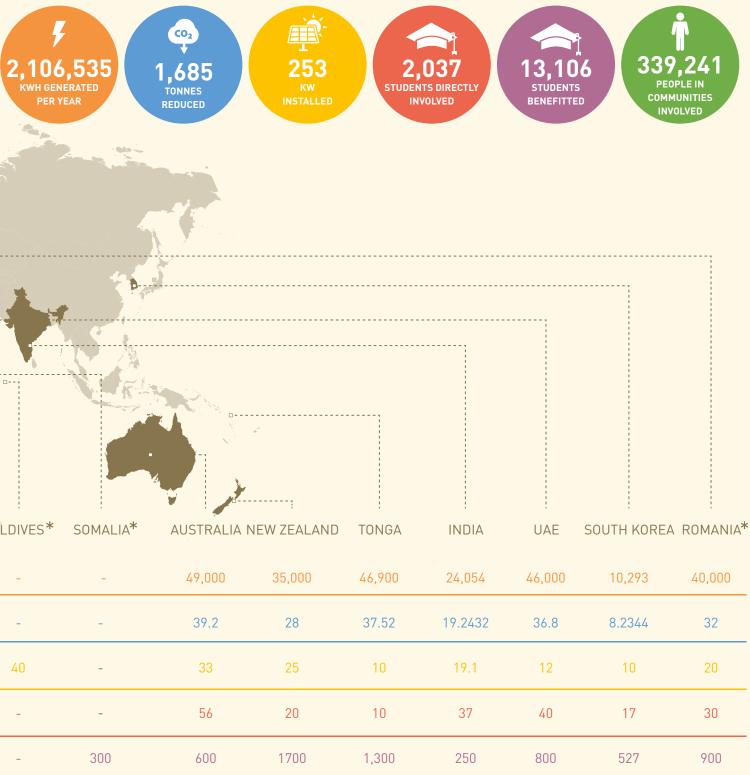
2016 DR. GRO BRUNDTLAND Former Prime Minister of Norway Deputy Chair of the Elders

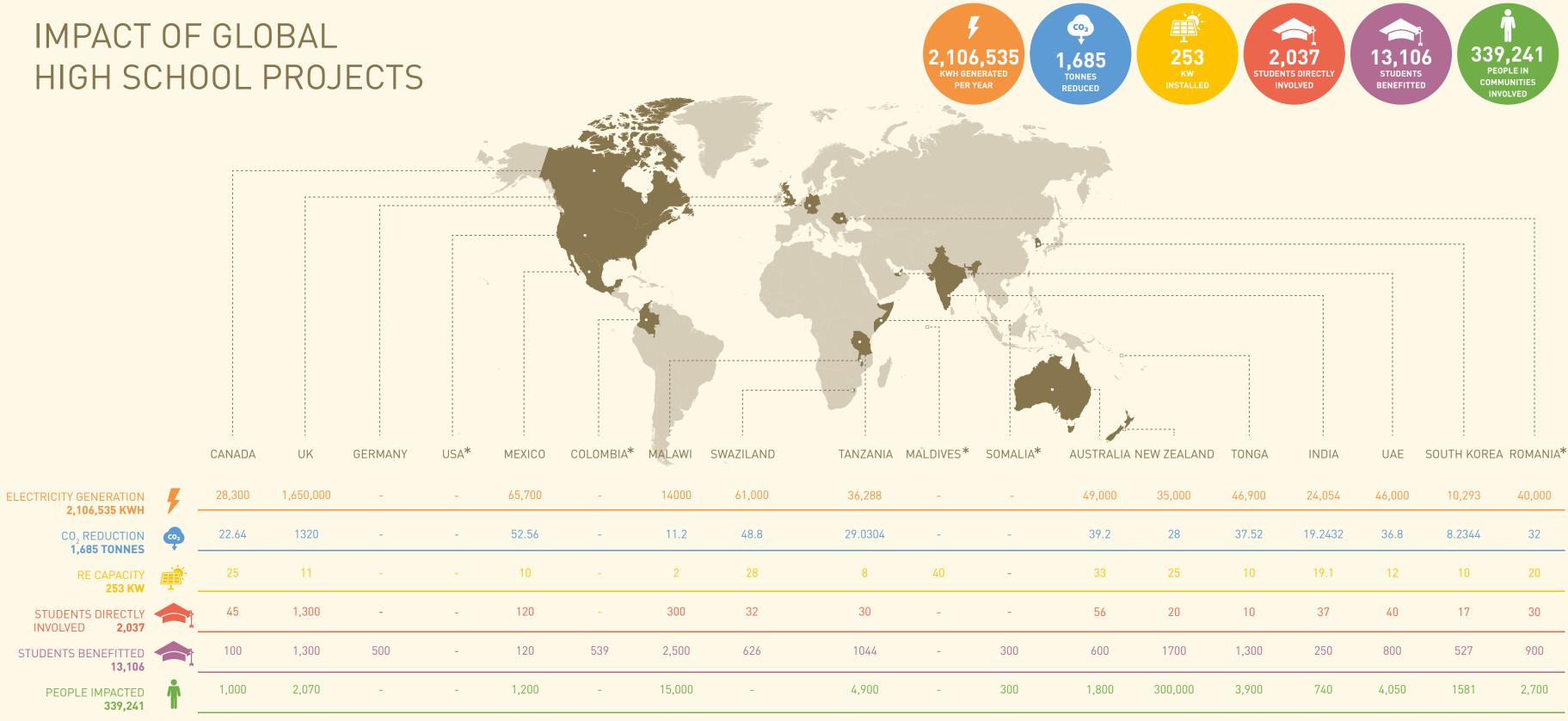
CASE STUDY WATERFORD KAMHLABAUWCSA GLOBAL HIGH SCHOOL

Founded in 1963 with just 16 students, the Waterford Kamhlaba United World College of Southern Africa has grown to accommodate over 600 students. The College has provided opportunities for academic achievement, personal growth and leadership development to students from across southern Africa, keeping its earliest ideals of courage, leadership, equality, personal responsibility and academic excellence at its core.

Winning the 2015 Zayed Future Energy Prize in the Global High Schools category, Africa, allowed the school to implement its project to become carbon-neutral by 2020. The school successfully installed an 800-W wind turbine, a 22-kW solar photovoltaic system, a biogas digester to supply cooking gas for the school cafeteria, new solar thermal geysers for water heating, and energy monitoring hardware to measure, monitor and manage the school's electricity consumption. To date, 32 students have taken part in the project, which has directly impacted a further 626 students attending the school.







THE NEXT GENERATION OF ENERGY INNOVATORS

Since the launch of the Global High Schools category in 2012, as part of the UAE leadership's commitment to the Sustainable Energy for All (SE4All) initiative, more than 2,000 students have been directly involved in the projects of award-winning schools and academies. Over 13,000 students in total have benefitted from these projects, as well as 339,000 people living in local communities. Almost 2.1 million kWh have been generated, solar panels with a capacity of 253 kW installed, and CO₂ emissions cut by over 1600 tonnes.

Previous winners

2013 THE AMERICAS Secundaria Tecnica 120 - Mexico EUROPE Okehampton College - UK AFRICA Kirya Secondary School - Tanzania ASIA Shaikh Khalifa Bin Zayed Bangladesh Islamia School – UAE

2014 THE AMERICAS Bronx Design & Construction Academy - USA EUROPE Gheoghe Rosca Codreanu National College – Romania AFRICA Nkhata Bay School Authority – Malawi ASIA Kalkeri Sangeet Vidyalaya - India OCEANIA Tonga High School – Tonga 2015 THE AMERICAS Munro Academy - Canada EUROPE Petru Rares National College - Romania AFRICA Waterford Kamhlaba - Swaziland ASIA Addu High School - Maldives OCEANIA Melbourne Girls' College - Australia

2016 THE AMERICAS Institución Educativa Gabriel Plazas - Colombia EUROPE Schülerforschungszentrum Südwürttemberg (SFZ) - Germany AFRICA SOS HG Sheikh Secondary School - Somalia ASIA Korea Science Academy of KAIST - Korea OCEANIA Cashmere High School - New Zealand



CASE STUDY TANZANIA GREEN SCHOOL NETWORK GLOBAL HIGH SCHOOL

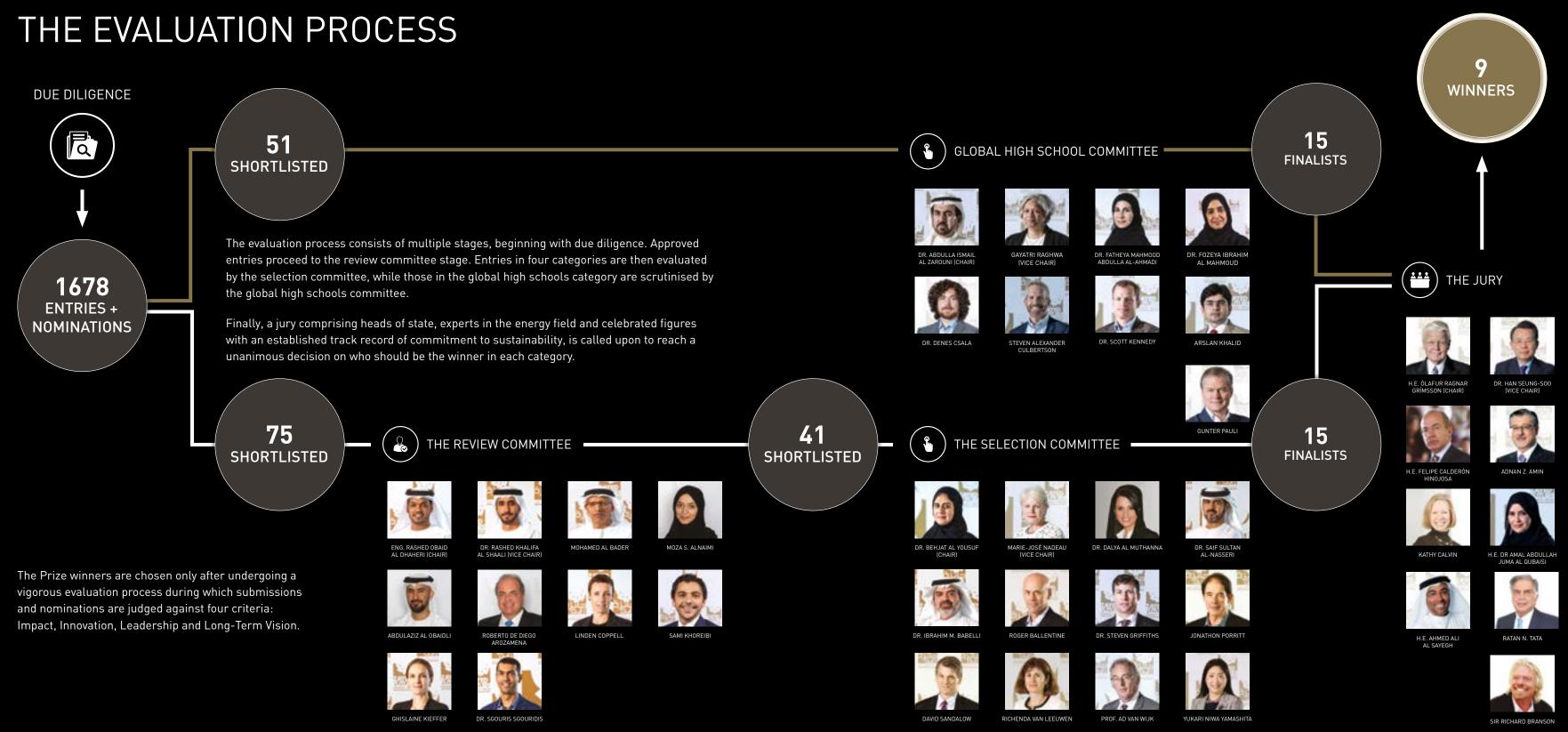
The Tanzania Green School Network comprises three secondary schools in the Kilimanjaro region—Makomu, Kirya and Kileo—and aims to be a local knowledge centre for practical environmental education.

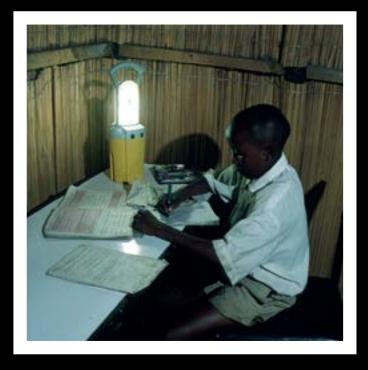
The Network does this by engaging the neighbouring community through outreach initiatives with students, parents, and village and ward leaders to promote the use of efficient alternative energy sources, reduce deforestation, help monitor and combat the effects of climate change, and promote sustainability.

Winning the Zayed Future Energy Prize in the Global High Schools Category, Africa, in 2013 has since allowed the Network's schools to operate in the evening for the first time, thanks to an 8-kW solar PV system that supports the increased energy requirements. The Network has also benefitted from the introduction of energy-efficient cooking stoves and a biogas digester system at the Makomu School, significantly reducing energy costs.

Over 30 students participated in the installation and deployment of the new technologies, from conception to execution, making student involvement the cornerstone of this journey and more than 1000 students are benefitting from the project.







The solar lantern systems produced by past winners of the Zayed Future Energy Prize have transformed people's lives. These systems are clean and safe unlike the kerosene lamps which they are replacing, and with their improved design they cost far less to produce and to buy. Running on solar power, they cost nothing to run. As they provide reliable light throughout the hours of darkness, allowing children to read for longer, levels of academic achievement are improving, and with no fumes, solar lanterns do not cause respiratory illnesses.



330,000,000

kWh have been generated by solar lantern systems developed by winners of the Zayed Future Energy Prize since it was established in 2008.





2017 WINNERS

All the winners of the Zayed Future Energy Prize have been chosen because of the unique contributions that they have made to attaining a sustainable future. These innovative pioneers have made a lasting impression on the lives of millions of people. This year's winners continue to break new ground in sustainability and represent what can be achieved when human ingenuity and determination are applied to solving the world's most pressing problems.



















LIFETIME ACHIEVEMENT LIJUNFENG - CHINA

Li has been an independent voice on energy policy in China, repeatedly calling for a reduction in the reliance on coal and to strengthen its renewable power targets. He has dedicated his 30-year career to energy economy and energy environment studies.

Li Junfeng joined the Energy Research Institute of the National Development and Reform Commission (ERI NDRC) as a senior research fellow in 1982, where his research focused on climate, energy, the economy and policy. He then spent two years as an economist at the World Bank in Washington before returning as deputy director of ERI NDRC in 1994, where he was appointed Director General in 2011.

Li drafted many key documents in China, including the Renewable Energy Law, which was passed in 2005, and facilitated the country's boom in renewable energy development.

He has held a number of important external roles—for instance, serving as vice-chairman of Global Wind Energy Council and REN21. He has engaged in renewable energy project development for Global Environmental Facility, the World Bank and the United Nations Development Programme.

Li is currently director general of the National Center for Climate Change Strategy and International Cooperation – National Development and Reform Commission, President of the Chinese Renewable Energy Industries Association (CREIA), and a member of China's National Energy Advisory Council, the Expert Committee of the National High-tech R&D Program, an academic committee for China's Ministry of Environmental Protection, and an expert committee on low carbon development for Beijing, Shanghai and Shanxi.



LARGE CORPORATION GE - UNITED STATES OF AMERICA

Established in 1892, General Electric (GE) is a globally diversified technology and financial services company that operates through the following segments: power and water, oil and gas, aviation, healthcare, transportation and capital. GE Renewable Energy is a start-up that brings together one of the broadest product and service portfolios of the renewable energy industry. The start-up has activities in large hydro, concentrated solar power, tidal energy, solar energy and battery storage.

A significant part of GE's revenue is poured into the Ecomagination initiative. The programme aims to solve energy efficiency and water problems, tackle sustainability, and limit the climate change effects of many of its devices, products and services. In turn, a large part of revenue is generated from products developed through this initiative. GE's growth strategy to enhance resource productivity and reduce environmental impact at a global scale through commercial solutions.

One recent example of the Ecomagination programme is the process of digitising wind farms with GE's Predix software programme. The software is used to analyse large amounts of data obtained by sensors built into the wind turbines. This allows operators to remotely optimise operations while boosting energy production.

Using GE's experience in developing technologies, GE Renewable Energy has installed more than 370 gigawatts of capacity globally through combining onshore and offshore wind, hydro and other innovative technologies such as concentrated solar power. GE aims to provide a cleaner and more sustainable future by investing in and accelerating its technological innovation.



SMALL AND MEDIUM ENTERPRISE SONNEN GMBH - GERMANY

Sonnen, a German SME, is a smart energy home and commercial energy storage system manufacturer guided by a strong vision of making energy clean, accessible, stable and affordable for everyone. Its innovative product design was one of the reasons it has been added to MIT's list of the world's 50 Smartest Companies 2016.

The SonnenBatterie is a smart storage system whose innovation lies in its integrated system development. It includes a software-operated energy manager that automatically controls solar energy production and consumption, which is one of the biggest challenges of renewable energy. In cases of power shortages caused by bad weather, or where the grid does not provide enough energy, commercial users can also use the battery for peak shaving, which means that it stores energy at low usage times and uses it during peak hours.

Sonnen is a member of industry associations that put great effort into raising awareness amongst politicians to further support the industry. The raw materials they use such as lithium, are widely available and contain no rare earth elements, heavy metals or so-called conflict minerals.



NON-PROFIT ORGANISATION PRACTICAL ACTION - UNITED KINGDOM

Practical Action helps reduce energy poverty through advocacy and direct intervention. The NPO believes that actions and words must go together to change the world and is therefore committed to sharing all of the knowledge and learning it has captured over 50 years of development to inspire the widespread adoption of its approaches for the benefit of people everywhere.

Technology has a vital role to play in building livelihoods. This does not just mean physical infrastructure, machinery and equipment – it means knowledge skills and the capacity to organise and use these effectively. Practical Action currently has 90 projects in developing countries around the world which focus on energy access, food and agriculture, urban waste and water, and disaster risk reduction.

Practical Action is guided by a deep concern for future generations, a respect for diversity, and the recognition of basic human rights of all people regardless of gender, ethnicity, religion or physical ability. With this in mind, Practical Action develops human-scale practical solutions while ensuring that all projects are economically, environmentally, socially and institutionally sustainable.



GLOBAL HIGH SCHOOL - AFRICA STAREHE GIRLS' CENTRE AND SCHOOL - KENYA

"Our education, our strength." This is the motto of the Starehe Girls' Centre, a charitable national girls' high school catering to bright but economically and socially disadvantaged girls. The Centre takes a holistic education approach, which has enabled 95% of their students to gain admission to various local and international institutions after graduation.

The school provides a quality education that nurtures young people and teaches them to give back to the community. The students promote sustainability in their communities by helping to raise awareness about the measures that can be taken to curb global warming. Starehe Girls' Centre focuses on developing the physical, intellectual, spiritual and social attributes of every single student.

Due to high power costs, the school sometimes faces funding shortfalls. As a charitable institution, it aims to implement energy efficiency measures to reduce its annual electricity costs by 20%, and will channel part of the savings towards educating an additional ten socially underprivileged girls every year.



GLOBAL HIGH SCHOOL - ASIA GREEN SCHOOL BALI - INDONESIA

One of Green School Bali's long-term goals is to remove the school from the grid to become a completely sustainable and self-sufficient building, and to help find solutions to the country's electricity shortages. Thanks to a mix of renewable energy resources in the school, Green School Bali produces 72 kWh of its own energy. It also provides a wide range of learning experiences for their students. The students themselves, guided by teachers, experts and community members, implement and lead each and every aspect of the school's projects. This level of involvement allows them to build both their skills and the confidence to make a difference through community-based, entrepreneurial education.

Green School Bali's project will help create awareness in the community concerning the dangers of batteries as hazardous waste at the same time as helping to reduce Indonesia's growing electronic waste problem. Approximately one million phones and 35,000 laptops are replaced every year in Bali. The project will create new opportunities for cooperating with the Balinese community by collecting used batteries and collaborating on building a battery bank. The project will also reduce current CO_2 emissions by a third (from 33 tons of CO_2 a year to 11 tons).



GLOBAL HIGH SCHOOL - AMERICAS UNIDAD EDUCATIVA SAGRADOS CORAZONES 4 - BOLIVIA

Unidad Educativa Sagrados Corazones 4 is a coeducational school located in the municipality of San Juan, in Santa Cruz de la Sierra.

The school started with 56 students when it was founded in 1986. Due to hard work and a clear vision over the years, the school now hosts 479 students between 12 and 18 years old.

The school centres its education on reason, religion and love, and on cultivating important values and habits such as punctuality, citizen security, cleaning and caring for the environment. The teachers are committed to quality education and to providing a productive learning environment to help educate an active and healthy youth community.

The school aims to become a role model in its community by consistently being on the lookout for technological developments and innovations. The school aims to self-supply its own electricity and to install water collection equipment for on-site food production. These measures will help save on energy costs while providing opportunities for theoretical and practical teaching and educational programmes.



GLOBAL HIGH SCHOOL - EUROPE BELVEDERE COLLEGE - IRELAND

Belvedere College, a school for boys in Dublin, was founded in 1832. The College boasts famous alumni and long-established links with community groups and charitable organisations.

The school community, increasingly aware of climate justice issues, reacted to global environmental challenges by forming the Carbon Committee and reducing the school's carbon footprint by a quantifiable amount. The school also set up a successful 18-month grow lab pilot project, in order to produce food in an urban setting whilst having hands-on learning opportunities within water and energy sustainability.

With the strong belief that the students are part of the solution to today's environmental challenges, it wants to provide them with a practical experience of food production and its difficulties - including those related to energy (electricity and human) and water—as well as the chance to be more effectively involved in creating sustainable solutions.

The school hopes to further connect its students with the local community through outreach, in order to be a local educational hub, and with the world, in order to inspire future initiatives. It aims to create a global network and foster a sense of global citizenship and environmental stewardship.

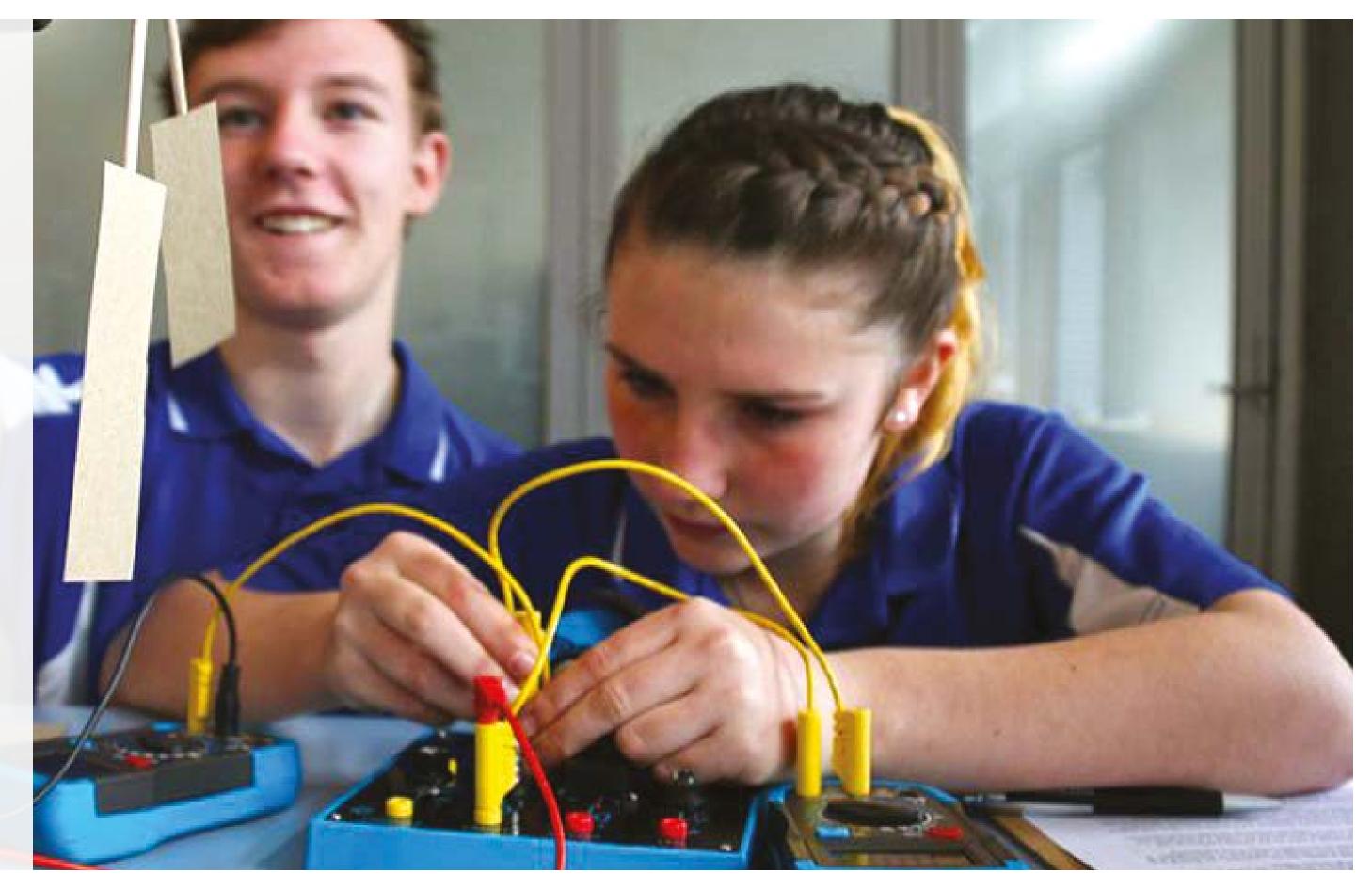


GLOBAL HIGH SCHOOL - OCEANIA HUONVILLE HIGH SCHOOL - AUSTRALIA

Huonville High School was established in 1940 in the rural municipality of the Huon Valley in Tasmania, a region where the core industries have traditionally been agriculture, aquaculture and forestry. The school has successfully started a tradition of providing quality state-funded education for students in years 7 to 12 from the surrounding community. It supports teachers as they work together to design personalised learning opportunities for all students, with the aim of encouraging both students and community members to think and act more sustainably.

Students have developed collaborative relationships with community organisations to share their environmental values and invite families, businesses and industries to reduce their carbon footprints and waste. The school has also become known for its efforts in energy efficiency.

The aim of the school is to be a renewable energy innovation centre where students learn about and use solar, wind and pedal power systems, waste conversion technology and energy auditing, while also improving its students' involvement in renewable and efficient energy use. This goal should be reached with the Zayed Energy Hub, a renewable energy laboratory soon to be built, which will also run on 100% renewable energy.





MEETING TODAY'S CHALLENGES FOR A BETTER TOMORROW

Inspired by the vision of Sheikh Zayed bin Sultan Al Nahyan, the Zayed Future Energy Prize seeks to empower and connect companies, organisations, schools, and individuals across the world who are innovative pioneers in the field of renewable energy and sustainability. The prize strives to give a voice to those that have also committed themselves to addressing environmental, economic, and social challenges posed by climate change. Over the years, remarkable people connected to the prize have devised innovative ways of reducing damage done to the environment and human health, while still fostering economic growth, improving energy security and access to basic services.

The prize provides a platform for information exchange and knowledge growth. From those with the spark of innovation right through to those young people who have the initiative to learn something new – the Zayed Future Energy Prize continues to forge a path to ensure a sustainable future for everyone across the globe.

منذ انطلاقها في عام 2008 ترك الفائزون بجائزة زايد لطاقة المستقبل أثراً إيجابياً على حياة أكثر من

289,000,000

شخص حول العالم. إذ ساهمت إنجازاتهم بتيسير الوصول إلى مياه الشرب النظيفة، ومصادر الطاقة المتجددة فضلاً عن تحسين اداء مواقد الطهي. Since its inception in 2008, the winners of the Zayed Future Energy Prize have positively affected the lives of over **289,000,000**

people through energy access, energy efficiency and improved cooking.