Start Up Energy Transition
Global Innovation Platform

SET100 List

The Top 100 Energy Start-ups of 2022

Powered by

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German Energy Agency

In cooperation with

WORLD ENERGY COUNCIL

A Message from our Leadership

Andreas Kuhlmann
Chief Executive
German Energy Agency (dena)

"Going into the 6th edition of the Start Up Energy Transition (SET) Award, we continue to see our network of energy sector stakeholders grow and reach new heights. Despite the challenges that we face today, the global energy start-up ecosystem has continued to prove resilient and produce solutions. We have seen the immense power that innovation and thinking outside-the-box has had, namely during the current times of environmental, diplomatic and economic uncertainty. In these moments, I believe that innovation presents an incredible opportunity to build a stronger net zero future. We are proud to have created a global platform which enables deep connections between start-ups, investors, corporates, and the public sector. We once again received a significant number of impressive start-up applications, which deserve global attention and support to have the maximum impact on reversing climate change."

"The global energy transition has entered an era of accelerated and disruptive technological innovation within an increasingly important context of affordability and energy justice. The World Energy Council is humanising energy by connecting energy transition start-ups, agile giants and investors, from within and beyond the energy sector. 2022 marks the 6th edition of the Start Up Energy Transition (SET) Award. We have received an incredible number of applications – the quality of which continues to improve year after year. Partnering with dena, we collaborate to systematically identify and promote the most promising new energy ventures across the world. The SET Award presents a unique platform to highlight and promote the next generation of responsible energy business leaders."

Dr. Angela Wilkinson
Secretary General & CEO
World Energy Council

About SET

In 2016, the German Energy Agency (dena), identified a strong need to support impactful innovation aimed at accelerating the energy transition worldwide. As such, dena, with the support of the German Federal Foreign Ministry for Economic Affairs and Energy (BMWK) and industry partners, created SET to establish deep, productive connections between corporate players, the public sector and the world of energy innovation. The goal? To rapidly scale the adoption of clean energy technologies while simultaneously increasing political will and public acceptance.

In 2017, the World Energy Council joined dena as a cooperation partner to expand the reach and leverage of SET. SET continues to enable these connections with it's unique position at the crossroads of the private and public sector. **At its core, the SET platform is built on three pillars: The SET Award, SET Tech Festival, and SET Newsroom**.

Our Vision:

"Innovation at the core of our net zero future"

We see start-ups and innovation playing a crucial role in our net zero future. Through the SET platform, we want to give a voice to the innovators of tomorrow to ensure that decision makers place innovation in energy at the top of their agendas, while industry leaders employ innovation as the clear path to their decarbonisation goals. Only then can we reverse climate change, drive the energy transition forward and secure a sustainable future.

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Our Mission:

"Strengthening the impact that energy innovators have in reaching climate neutrality"

Through our activities, we support, promote, and create opportunities for start-ups in the energy sector to scale-up impact and accelerate the global energy transition in order to reverse climate change.

"The SET Award gave us a significant boost of visibility and credibility. Participating was an exciting journey for us!"

Enerbrain team, Winner of the SET Award 2020

The SET100 List

The SET100 list is an annual compilation of the top 100 start-ups in energy transition. It features the most promising innovators who are transforming the industry and shaping the future of energy worldwide. The SET100 list was first launched in 2017 with the aim of offering young companies a platform to showcase their forward-looking solutions. The SET100 list offers a comprehensive collection of companies, represented both geographically and across all sectors of the clean energy field.

What's the SET Award?

The Start Up Energy Transition Award is an international competition for start-ups and young companies worldwide working on impactful ideas affecting the global energy transition and climate change. In the last six years, the award has received more than 2,700 applications from over 100 countries.

SET Award 2022

Going into the sixth year, SET is proud to present the top 100 international start-ups from the SET Award 2022 competition. More than 360 start-ups from 69 countries applied in 1 of 5 categories to showcase their game-changing solutions.

The #SET22 Categories

Clean Energy Generation

Smart Mobility & Transportation

Demand-side Innovation

Quality Energy Access & SDG-7

Energy Distribution & Storage

Methodology

SET designed this process to offer a fair and holistic representation of energy transition related start-ups determined by international and cross-sectional experts within the energy community. To accomplish this, the evaluation occurred in four phases:

Phase #1: Criteria Check

The SET team processed all +360 applications to determine if they met the minimum eligibility criteria. To participate in the SET Award, start-ups must have met the following criteria:

- The company must not have been founded more than 10 years ago
- There must have been a functioning prototype
- The company must be registered or be in the process of becoming registered and the applicant must be able to present a proof of concept or a client, and/or an industrial/corporate/institutional partner

Phase #2: Early Metrics Model

Start-ups that met the eligibility requirements were then evaluated by the SET specific start-up model built by our partner Early Metrics. The model incorporated the SET Award categories and application information, and measured: growth, impact, adoption, scalability, market penetration, and of course – innovation.

Phase #3: High-level Jury Evaluation

In accordance with the Early Metrics rating, the top third of start-ups with the highest scores were then evaluated by our high-level jury which was comprised of some the most prominent and influential individuals in the energy sector. See the SET jury here. On a 10-point scale system per question, each application was evaluated according to their relevance, business model, innovation level, market awareness and potential, and capacity to execute their strategies (finances, network, leadership, etc.).
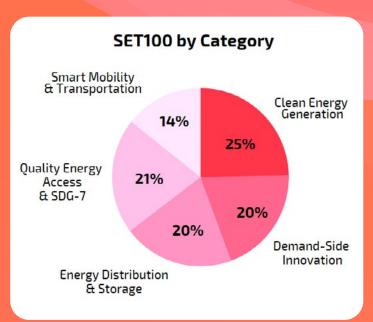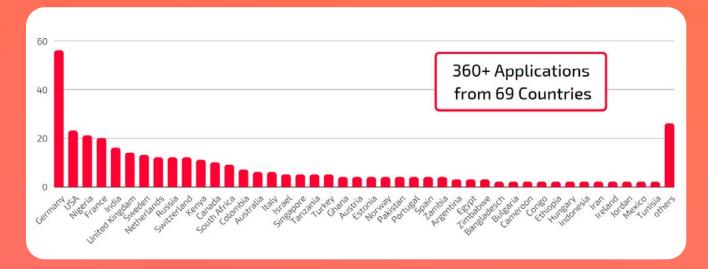
Phase #4: Quantitative & Qualitative Score Weighting

The scores from both the Early Metrics SET-specific start-up model and those scores provided by the high-level jury were then compared, analysed, weighted and combined to produce the SET100.
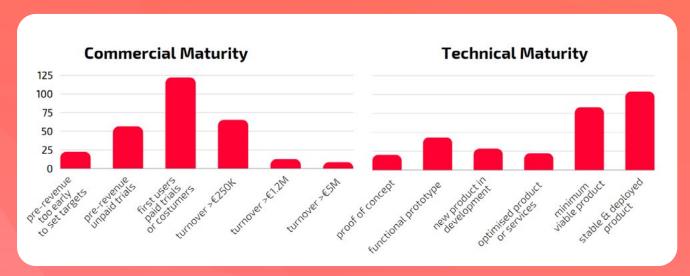
SET100 Distribution

360+ Applications in total

% of Qualified Applications

2019	2020	2021	2022
77%	69%	80%	80%

Qualified Applications per Stage

SET100 by Category

- Smart Mobility & Transportation — 14%
- Clean Energy Generation — 25%
- Demand-Side Innovation — 20%
- Energy Distribution & Storage — 20%
- Quality Energy Access & SDG-7 — 21%

360+ Applications from 69 Countries

Germany, USA, Nigeria, France, India, United Kingdom, Sweden, Netherlands, Russia, Switzerland, Kenya, Canada, South Africa, Colombia, Australia, Italy, Israel, Singapore, Tanzania, Turkey, Ghana, Austria, Estonia, Norway, Pakistan, Portugal, Spain, Zambia, Argentina, Egypt, Zimbabwe, Bangladesch, Bulgaria, Cameroon, Congo, Ethiopia, Hungary, Indonesia, Iran, Ireland, Jordan, Mexico, Tunisia, others

Commercial Maturity

pre-revenue too early to set targets, pre-revenue unpaid trials, first users paid trials or costumers, turnover >€250K, turnover >€1.2M, turnover >€5M

Technical Maturity

proof of concept, functional prototype, new product in development, optimised product or services, minimum viable product, stable & deployed product

Category: Clean Energy Generation

In this category, we are looking for start-ups who are developing clean energy generation solutions that could help to decarbonise our most energy-intensive sectors, as well as those accelerating the adoption of new solutions through capacity building.

Beem Energy | France

Beem Energy develops a range of hardware and software products specifically aimed at households to increase responsible use of energy. In 2020, the first product (Plug & Play solar kit) was launched and boasts innovative features including iconic design, a self-locking system and a meter connected to WiFi.

Box Synergy | Argentina

Box Synergy is dedicated to smart energy for people off the grid. The company builds hardware and IoT-solutions through solar chargers and power banks to provide power, energy storage, data and connectivity sources developed in a smart, sustainable and compact way.

Deveci Tech | The Netherlands

Enlil is a vertical smart wind turbine that has been designed to both harvest the energy from the natural wind, as well as those created by passing vehicles. By integrating SMART system, it enables to add modules such as tools to measure CO2 levels, data collection through ist IoT platform, and more.

Ecoclime Group AB | Sweden

The Ecoclime Group is a listed estate company that has developed a system for recovering and reusing thermal energy from building waste water and is active in three business areas: building management, automation systems and closed-loop energy.

Energy Shift | United Kingdom

Energy Shift is a web based blockchain platform that enables citizens to jointly invest and co-own solar parks, while competitors only facilitate the loaning of money from individuals to large companies, where most of the contracts go to large corporations.

ENVIRIA Energy Holding GmbH | Germany

ENVIRIA offers companies easy access to scalable Energy-as-a-Service solutions and the entire renewable energy ecosystem. With their large partner network, they offer individually tailored solutions that enable companies to effectively pursue their sustainable agenda, develop new sales opportunities and make their own contribution to the energy transition.

GenH | United States

GenH is an energy technology company that is reshaping the energy industrial system. With their product called Adaptive Hydro, GenH developed a stable source of income for dam and canal owners, at the same time electrifies dams in the international context and can be used as a pumped storage power plant.

Golu Hydrogen Technologies Inc. | Canada

Gölu-H2 enables the lowest cost on-site fuel cell quality hydrogen and clean electricity production, minimised storage requirements and minimised downtime. Maximised asset utilisation through continuous revenue generation via hydrogen, power, and carbon credit sales, which leads to a short payback period.

Heliac A/S | Denmark

The solar thermal collector system developed by Heliac optimises the use of solar resources and generates heat that can be used in energy-intensive industrial processes such as food or paper production and in district heating networks. The use helps companies to decarbonise their supply chains and reliable components.

Finalist

iNex Circular | France

iNex Circular developed the SAAS B2B tool "iNex sourcing", a technology of identification and qualification of waste for biogas, recyclers and industrials. Thanks to statistical models, machine learning and data from open-data sources, iNex sourcing makes the circular economy on the ground a reality.

Metroscope | France

Metroscope is a software start-up with presence in the EU and North America, monitorng 50 GW of industrial assets. The monitoring and diagnostic software leads to better error detection, a reduction in maintenance volumes and an improvement in the overall efficiency of industrial plants.

Finalist

Modvion AB | Sweden

Modvion develops demanding designs made of laminated wood, nature's carbon fibre, for large-scale applications. Thanks to their patented module system, Modvion has been able to develop the next generation of wind turbine towers that enables climate-neutral wind power at lower total cost.

Nabrawind Technologies SL | Spain

Nabrawind designs and develops advanced technologies for wind turbine components. They focus on disruptive technologies with three strategic drivers: drastic cost of energy reduction, solutions to break logistic barriers that currently restrain the onshore wind turbine growth and use of proven baselines technologies to provide robust and reliable components.

Omniflow | Portugal

Omniflow develops wind and solar powered smart IoT lampposts and transforms traditional streetlights into a sustainable platform. The results are housing added value services, such as 5G small cells, computer vision or public WiFi which has the advantage that energy generation and storage from renewable energy are integrated.

Persee | France

The service company Persee supports companies with digital solutions for an entire hydrogen infrastructure project from conception to operation. For efficient planning and management, Persee uses tools such as MobHy, TedHy or SopHy and adapts it individually to the hydrogen project plans of each customer.

PLATIO Solar | Hungary

PLATIO is an innovative, double green solar building material that generates clean energy and is produced in an environmental friendly way based on recycled plastic. The aim is to privde clean energy for cities, buildings and ports.

Finalist

PowerUP Fuel Cells OÜ | Estonia

PowerUP produces hydrogen fuel cell based generators. These smart generators are sustainable, compact, light weight, noise-free, odourless and require minimal maintenance. The UP product range can help revolutionize various industries such as marine, construction or hospitals.

Reverion GmbH | Germany

Reverion enables an emission-free future and ensures the success of the global energy transition through the optimal use of biogas. The technology doubles electricity production through electrical efficiencies of 80%. Additionally, Reverion stabilizes the power grid in electrolysis mode and produces renewable gases.

SEAROVER | Turkey

Searover provides AI, IoT and robotics solutions for predictive maintenance and condition monitoring of power and subsea assets. It aims to realise reliability-centric operations by providing data and analytics to enable asset management and risk planning, enabling companies to move forward full digitalisation and automation in the energy industry.

Sereema | France

Sereema uses a digital solution called Windfit to help wind turbine owners better understand their technology. Windfit enables the analysis of underperforming wind turbines and provides correction guidelines on a web portal. Sereema is collaborating with major industry players around the world and has helped improve power generation and increase profits.

Solar AI Technologies | Singapore

Solar AI Technologies provides small and medium businesses and homeowners access to risk-free solar solutions at zero upfront costs. By combining geospatial data analytics with software, solar AI dramatically reduces cost of sales and operations, allowing investors to finance smaller rooftop solar projects at attractive returns.

Unergy | Colombia

Unergy lowers investment and information barriers in the energy sector through collaborative solar panel platforms that connect people and businesses. The focus is on mobilising resources with green projects and creating a marketplace where shares on ongoing projects can be bought or sold.

Uprise Energy | United States

Uprise Energy is a design, engineering and manufacturing company that has launched a 10-kW-portable wind turbine with integrated energy storage and another technology, the Uprise Energy Mobile Power Station. The solution offers a low cost, clean energy alternative to diesel generators and is suitable for decentralised power generation.

Wegaw SA | Switzerland

Wegaw combines satellite data analystics with machine learning to optimise clean energy production and trading. This involves monitoring environmental variables and is crucial to clean energy production and forecasting. The integrative technology combines AI and machine learning with data analysis across multiple earth observation platforms.

WIND my ROOF | France

WIND my ROOF develops a renewable energy technology in buildings that combines small wind turbines and solar panels. The generation modules are a system called WindBox and adapts tot he conditions of buildings, so that the combination of wind and solar can produce energy according to own needs all year round.

Category: Demand-side Innovation

We are searching for innovators working on the next big breakthrough that will aid industries, cities and households to track, manage, reduce or adapt their energy consumption. The start-ups that applied are working in the areas of smart devices, applications, materials, substitutes and behaviour-changing innovations that help promote and improve energy use should apply for this category.
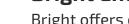
aedifion GmbH | Germany

The aedifion cloud platform ensures sustainable, optimised building operation and provides recommendations for more efficiency with the help of AI. They achieve this by ensuring data availability in the shortest possible time. Subsequently, the building operation is self-regulated in a predictive way and thus saves CO2 and energy.

Blue Box Air, LLC | United States

Blue Box is a pioneer in building energy efficiency by optimising commercial HVAC systems with its patented enzyme heat transfer coil process. The company has now set a goal to redesign today's HVAC systems and reduce HFC's by 98 %.

Bright Energy AB | Sweden

Bright offers energy companies a digital platform that enables a whole new customer journey and all their services gathered in one digital platform. Their unique turn-key white label app helps end customers control, manage and optimise their consumption.

Carbonlaces | United Kingdom

Carbonlaces is building the Amazon for decarbonisation. Its results-based climate finance marketplace bridges supply and demand of capital by providing common metrics, data-driven recommendations with targeted funding programmes for decarbonising the financed emissions value chain at scale.

ClimateView | Sweden

ClimateView is a climate action technology company that helps cities transform climate planning into progress. It combines data, agent-based modeling and interface design in a single collaborative decision-making platform to help cities manage the transition to zero carbon economies.

DABBEL | Germany

DABBEL offers an autonomous control system for commercial buildings. It is based on predictive Artificial Intelligence, which autonomously adapts to each building and replaces manual control by taking control of the HVAC systems in real time. This reduces HVAC energy consumption and CO_2 emissions by up to 40%.

enersis suisse AG | Switzerland

enersis develops and operates a digital platform for planning and simulation of the energy system transformation. The platform brings together data from important stakeholders, creates transparency on the status quo of CO_2 emissions and puts clients on the fastest track to zero emissions.

enmacc GmbH | Germany

enmacc is Europe's fastest-growing OTC energy trading platform and digitalises energy trading from end-to-end. Market participants gain speed, efficiency, and security while growing their direct network in professional trading. enmacc delivers more market opportunities and liquidity as well as new business potential.

Finalist

Envio Systems GmbH | Germany

Envio Systems' affordable end-to-end solution can transform any commercial facility into a smart building. Our solution allows any building to operate as one completely integrated ecosystem able to collect, analyse, optimise autonomously, or manually in real time from one single pane of glass.

Exnaton AG | Switzerland

Their software "EnergyCommunity" empowers electricity providers to set up energy communities in their distribution areas. Households can directly buy renewable electricity from their neighbors (from 'peer to peer') on the EnergyCommunity platform and can track their environmental impact with the EnergyCommunity app.

KUGU Home GmbH | Germany

KUGU is an integrative platform for energy data and all related processes for real estate portfolios. Their smart data processing allows them to save up to 30% of energy in residential and commercial buildings. The main focus lies on metering the data of heat and warm water.

LANCEY Energy Storage | France

LANCEY Energy Storage has been developed an intelligent electric heaters with an embedded lithium-ion battery. it offers unprecedented performance thanks to its cloud-based Energy Management System, which is managed by AI program.

Finalist

NEU Energy | Colombia

NEU Energy is reinventing the process of producing and consuming energy. As a next generation AI-driven electricity retailer, their goal is to digitalise and democratise clean energy to lower costumer's energy bills.

PassiveLogic | United States

PassiveLogic is the first fully autonomous platform for buildings, going beyond "smart" or "automated." Autonomous buildings can introspect their own physics and provide deep insights, analytics, and more importantly, analysis. These can then be used to automate the commissioning and optimisation of systems.

Finalist

R8 Technologies OÜ | Estonia

R8 Technologies has developed one of the most successful Artificial Intelligence based tool in the world, R8 Digital Operator that takes premium class commercial buildings' technical management to the next generation by ensuring highest indoor climate comfort and energy efficiency.

Rudolf Energy | Mexico

Rudolf is a "set it and forget it robo-advisor" that helps reduce electric costs and carbon footprint. Their software downloads and consolidates utility bills in a data base and generates visuals to monitor KPIs for the portfolio and benchmarking.

Sense Labs Inc. | United States

Sense is an AI software development company that is accelerating the energy transition by providing real-time load disaggregation to consumers and energy companies. We aim to reduce global carbon emissions by making homes smart and efficient.

Solytic GmbH | Germany

Solytic offers a digital platform to performance of distributed solar energy throughout the entire life cycle using data and AI. The interconnected digital value chain allows users to receive full performance transparency on individual needs. Translating raw data into actionable insights is a unique app.

Vacus Tech Pvt Ltd. | India

Vacus is a technology start-up providing intelligent wireless infrastructure management solutions for building green data centers. They develop wireless radio products, hardware modules, and reference designs that enable accurate real-time service.

Wattnow | Tunisia

Wattnow offers an IoT solution combining hardware and software. Their devices collect real-time energy data, control and automate loads. Everything can be accessed and visualised on a user friendly cloud-based dashboard and mobile-app.

Category: Energy Distribution & Storage

This category presents tech-savvy start-ups working on distribution and climate-neutral storage solutions for a micro, mini, local or system wide application.

betteries AMPS GmbH | Germany

Betteries uses deep technology know-how and frontier market experience to deliver mobile and affordable power. Betteries is a multipurpose power system. Each Betteries system can store 3 kWh to 12 kWh of energy, offers fast charging capability, and can flexibly deliver up to 5 kW of electric DC as well as AC power.

BioEsol | Mexico

BioEsol offers sustainable energy autonomy through an intelligent energy storage system. Their software implements information from power generation to use and is based on the following characteristics: energy Storage, UPS, peak shaving, and direct current use.

EcoJoule | Australia

EcoJoule created a unique hardware that is installed in front of the meter and provides a non-wire alternative that improves the grid power quality and reduces congestions. Their solutions are all based on state of the are power electronics and profound stabilisation algorithm.

E-Lyte Innovations GmbH | Germany

E-Lyt produces, develops and licenses tailor-made electrolytes for batteries to enable optimal performance for a wide variety of cell chemistries and applications. They develop and produce customised electrolyte solutions for lithium-ion batteries, sodium-ion batteries, supercapacitors, and several other modern cell technologies in Europe with a reduced carbon footprint.

encoord Inc. | United States

encoord's mission is to enable global energy transitions by providing decision makers with solutions to decarbonise energy systems. encoord's main product is the Scenario Analysis Interface for Energy Systems (SAInt), a software that can model coupled energy networks using simulation and optimisation algorithms.

Enspired GmbH | Austria

Enspired is a fully digital energy trading company with the sole purpose of building a flexibility portfolio to support the efficient integration of renewables on power spot markets. They offer Trading-as-a-Service (TaaS) for fully automated optimisation of flexible assets on spot markets across all market phases.

FlyNex GmbH | Germany

FlyNex helps system operators to systematically plan, collect and analyse data to manage their assets. As a software as a service company they provide reliable and secure solutions to make it as easy as possible for companies to reduce maintenance costs and to get digital insights by using drones as daily part of their business.

Fusebox OÜ | Estonia

The Fusebox Virtual Power Plant is the efficient and fully automated demand-side response platform that is also integrated with distributed energy storage systems to maximise energy savings, balancing market revenues and inject more intermittent renewable energy sources into the grid.

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Greenli-ion Pte Ltd. | Singapore

Green Li-ion has developed a technology that fully rejuvenates Lithium-Ion batteries, with a zero toxic discharge. Their unique innovation not only helps to reuse precious materials but also speeds up the current recycling processes and drastically lowers costs.

Greenventory GmbH | Germany

Greenventory builds an easy-to-use SaaS solution for energy planning from individual buildings to cities. To focus on the procurement of data using a database, satellite images, AI support decision-making in energy planning and strategic decisions.

Gridcognition | Australia

Gridcognition is a software start-up that supports interest groups in decarbonising their decision-making processes. With the help of software, the company succeeds in simplifying complex data, introducing decentralised energy resources and achieving the best result, both economically and ecologically.

HySiLabs | France

HySiLabs has developed a hydrogen-based liquid carrier that is stable at ambient conditions, allowing logistics similar to traditional fuels. With the unique characteristics of hydrogen density, it can reuse the convetional liquid infrastructures for transportation and doesn't need any energy input for releasing the hydrogen in it.

Finalist

LeydenJar Technologies B.V. | The Netherlands

LeydenJar develops pure silicon anode technologies boosting the density of Lithium-Ion by 70% while reducing the CO_2 emissions of the production by 85%. LeydenJar thus enables the growth of the battery industry whilst making battery production more sustainable.

Finalist

LiveEO GmbH | Germany

LiveEO is a real-time earth observation application that uses AI and satellite imagery to deliver innovative infrastructure monitoring in the verticals railway, electricity, and pipelines. Their technology allows operators to save on operational expenses by observing dangers from external threats.

methetnet | The Netherlands

With the Withthegrid technology, Methetnet supports system owners in the electricity, gas, district heating and water infrastructure with an end-to-end solution. The cloud-based asset management intelligence platform reduces workloads, operational and capital expenditures, and seeks to accelerate the implementation of digital projects.

NovoGrid Ltd. | Ireland

NovoGrid is a pioneer in intelligent grid visibility software. They have grown from a research project at University College Dublin to a commercially operating business with a suite of patented software products capable of benefiting electricity generators, energy traders and utilities.

Sentrisense GmbH | Germany

Sentrisense helps power transmission and power distribution companies to benchmark the health of conductors, and detect complex problems such as corrosion, ageing, ice deposits, fallen trees, bird impacts, with a strong focus on easy of use and simple scalability. It can also be used for optimising the grid, by knowing the ampacity in real time.

SmartPulse Technology | United Kingdom

SmartPulse combines IoT infrastructure and AI algorithms to develop a PaaS solution for short term trading optimisation for energy generators and consumers. The platform also acts as a marketplace for forecasting service providers and power retail operations.

STABL Energy GmbH | Germany

STABL Energy is a supplier of storage integrators and develops software-based power converters for commercial and utility-scale battery storage systems. The goal is to offset losses, reduce operating costs and make battery storage systems more accessible and affordable.

VFlow Tech Pte Ltd. | Singapore

V-Flow Tech is reinventing vanadium redox flow technology, with a vision to develop the cheapest and most scalable vanadium redox flow batteries in the world. The vanadium redox flow battery outperforms its flow battery competitors in terms of round-trip efficiency, energy density and thermal window.

Zaphiro Technologies | Switzerland

Zaphiro has developed a real-time monitoring and automation system that enhances the efficiency and profitability of grid operations. Moreover, Zaphiro Technologies transforms the electrical distribution grids from passive to pro-active. Zaphiro Technologies is a spin-off of the Swiss Federal Institute of Technology of Lausanne (EPFL).

Category: Smart Mobility & Transportation

This category features start-ups offering creative approaches to infrastructure, public planning, logistics, shipping and freight services, vehicles and other modes of transport that are key to a well-functioning & sustainable mobility sector of tomorrow.

Ben Fleet Services GmbH | Germany

Ben Fleet Services is the infrastructure provider for the mobility of the future. They aim to revolutionise the service market for all fleet vehicles. With digital interfaces, their flexible and comprehensive range of services is efficiently integrated into their customers' existing systems.

BlueNav | France

BlueNav is revolutionising clean mobility in navigation. The team has developed a complete ecosystem around clean energy and propulsion for boats and is committed to meeting the challenge of user-friendly and environmentally friendly mobility on the water.

BluWave-ai | Canada

Built on BluWave-ai's distributed AI-enabled platform, the EV Fleet Orchestrator optimises energy costs in real time by consolidating the many parameters of energy and fleet operations, providing a holistic view and coordinated energy dispatch/control.

Hergele Mobility | Turkey

Hergele Mobility empowers entrepreneurs to launch their shared mobility platforms globally by offering an all inclusive pack for emerging operators to start their own fleet in weeks. Fleet Pack includes the hardware and the software.

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CAKE 0 emission | Sweden

CAKE develops high-quality and sustainable electric off-road motorcycles. The start-up makes no compromises: Everything, from frame, to wheels have been specifically engineered and manufactured to reach the intended level of performance in riding, durability and overall quality.

Deftpower B.V. | The Netherlands

Deftpower is pioneering a new wave of electric car charging businesses. They make it easier for the industry to connect with EV drivers and ensure that smart charging becomes a business case for EV owners, utilities and car manufacturers. They do this with their SaaS platform that already hosts 100,000 EVs today.

eDRV B.V. | The Netherlands

eDRV is a start-up catering to the growing needs of electric vehicle charging operators everywhere. Their API-first EV charging management platform powers 10 global networks with a pipeline of 2,500 locations in their first year of operations.

Elonroad AB | Sweden

Elonroad's solution charges various electric vehicles, regardless if you are driving or if you are parked. It is the safe and energy efficient alternative to other charging options and the built-in software converts the road into a smart road infrastructure. Their charging road enables smaller batteries in EVs while still increasing their utility through increased range.

MOLABO GmbH | Germany

MOLABO produces an electric drive capable of delivering high power at safe-to-touch voltages of 48 V. ISCAD V50 is a 50kW continuous power electric drive, certified for the marine market. 50 KW at 48 V is made possible by the patented stator cage technology.

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Onomotion GmbH | Germany

Onomotion offers environmentally friendly urban logistics solutions by synergising micromobility, standardized containers, the physical internet and AI. Their ONO eCargobike, is an emission-free solution revolutionising transportation of goods within cities.

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Pantonium Inc. | Canada

Pantonium develops on-demand, macrotransit solutions allowing a scalable, pop-up transportation service anywhere. Their software builds and self-adjusts routes and schedules in real-time, based on dynamic changes, delays, cancellations and more without any need for human intervention.

PIONIX GmbH | Germany

PIONIX develops the commercial open source software stack EVerest. The solution acts as operating system in EV charging stations, covering everything from private wallboxes, public AC charging to DC-fast chargers. As an open source product, EVerest can be used commercially by any vendor.

RUNWITHIT Synthetics Inc. | Canada

RUNWITHIT is an AI-based modelling platform company that supplies leaders and researchers with regional, digital models to support dynamic strategic, operational and tactical planning, education, and optimisation around disrupted futures. RWI's modelling platform is utilised as a rapidly adaptive nexus for interconnecting domain expertise, data and research.

ZipCharge | United Kingdom

ZipCharge is building the world's first platform of portable EV charging to provide affordable, convenient and low-cost EV charging to everyone, anywhere they park. Their mission is to democratise EV charging by removing the main barrier to electric vehicle ownership – the inability to charge at home.

Category: Quality Energy Access & SDG-7

In this category, we feature start-ups that have the potential to make the biggest dent in ensuring access to affordable energy for all. We selected diverse solutions for technology, financing, awareness & capacity building, that can reach far and wide, have a very clear social drive and most of all, will make a large impact.

1516 Green Energy Technology Company Ltd. | Vietnam

1516 develops products that apply technology and renewable energy for urban development and education towards the goal of sustainable development. 1516 also develops wind turbine system to provide electricity for poor communities and schools.

Boreal Light GmbH | Germany

Boreal Light designs and manufactures affordable solar water desalination and filtration systems for off-grid communities around the globe. The systems are capable of delivering high quality hygiene drinking, irrigation, fish farm and sanitation water from any kind of high saline and polluted water resources, powered fully by solar.

Eja-Ice Ltd. | United Kingdom

Eja-Ice is a solar powered refrigeration and cold chain company established in the United Kingdom with business operations in Sub Saharan Africa. The core product is a hardware with a digital component: a solar powered cooling tricycle for last mile delivery of vegetable, fish, meat and beverages.

Enent | Pakistan

Enent is a clean-tech startup designing innovative products that can reduce energy waste. They aim to provide cost effective, clean and affordable solutions to the most pressing and daunting problems. Their core product, "Intellica 3 phase Automatic Load Balancer", is based on load balancing technology that has received massive appraisal and recognition.

Enexor BioEnergy | United States

Enexor BioEnergy has developed the Bio-CHP, a renewable energy and carbon conversion solution for the world's organic, biomass, and plastic waste problems. The patented Bio-CHP system is an onsite, easily portable modular solution, enabling immediate impact and eliminates expensive transportation costs.

Green Scene Energy Plc | Ethiopia

Green Scene Energy provides digitally managed affordable solar energy solutions for off-grid communities in Ethiopia. It is the first Ethiopian renewable energy company to offer pay-as-you-go, installment-based payment for solar home systems via mobile-phone airtime transaction purchase.

Finalist

Jaza | Canada

Jaza Energy provides access to clean electricity in rural villages in Tanzania and Nigeria through solar energy hubs. Each hub is operated by local women and offers customers home electrification kits and rental battery packs.

Koolboks SAS | France

Koolboks makes refrigeration accessible and affordable to all. Their solar-powered refrigeraor/freezers, equipped with Pay-As-You-Go technology, enable eco-friendly and accessible refrigeration to everyone who needs it.
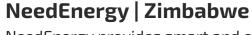
Finalist

Manamuz Electric Ltd. | Nigeria

Manamuz Electric deploys cutting-edge electrical and solar energy systems in Nigeria. They have developed a solution called Coldbox Store, a temperature-controlled supply chain for perishable agricultural products aiming to boost the resilience of agricultural supply chains.

MPower Ventures AG | Switzerland

MPower is a tech4impact venture tackling the challenges of energy access and financial inclusion in emerging markets. As local SMEs are key to the socioeconomical development of these countries, MPower creates a B2B platform to empower the next generation of entrepreneurs.

Finalist

NeedEnergy | Zimbabwe

NeedEnergy provides smart and clean energy solutions using data intelligence. Their AI-based technology allows users to manage grids based on distributed energy resources, monitor energy and power consumption, generate energy, analyse data, and more. They are focusing grids with minimum connectivity.

nOa climate | Germany

nOa climate is the leader in state-of-the-art household sized bioreactor technology. They are offering household sized bioreactors in 4 different sizes along with the accompanying biogas appliances including stoves, cookers, burners, lamps, water heaters, electricity generators and an eco-toilet as a clean sanitation option.

Pamodzi Bio Energy Solutions | Nigeria

A freshly established start-up company focused on developing highly scalable biogas digesters to supply clean, affordable, and sustainable energy for productive use in the rural parts of Africa.

Pollinate Group | Australia

Pollinate Group's core service is the provision of access to affordable clean energy. They develop women entrepreneurs who are trusted within their communities to communicate the benefits of clean energy products and help families to transition from kerosene to clean energy products such as solar lights and clean cookstoves.

Powerstove Offgrid Electricity Ltd. | Nigeria

A clean-energy focused company that designs and manufactures Powerstove, a clean cookstove that self-power household electrical systems. Designed to be ultra-efficient, it is compact, with sleek profile that makes it a gateway product for households in developing markets seeking an affordable energy home system with light points, phone charging and clean cooking.

Renew Power Projects Ltd. | Pakistan

Renew offers an all in one plug n play model with hassle free solutions ranging from 1kw, 2kw, 3kw and 5kw that can parallel up to 16 units on buy now pay later model.

Solar Freeze | Kenya

Solar Freeze is a pioneer in solar-powered cold storage products and services for the storage of food and medical products and temperature sensitive vaccines. Their goal is to help off-grid and weak-grid communities such as refugee camps, clinics and rural areas access reliable and effective cold storage solutions.

Solarcool | South Africa

Solarcool developed a Cooling-as-a-Service solution. They provide a durable and affordable connected solar-powered cold room that uses the sun to preserve agricultural post-harvest and medicine sustainably in Sub-Saharan Africa.

SolarisKit Ltd. | United Kingdom

SolarisKit has developed the world's first flat-packable, self-assembled solar thermal collector. Their patent-pending solution provides an affordable and practical solution to help decarbonise heat in the global south by harnessing sunlight to meet hot water demand.

Standard Microgrid Inc. | United States

Standard Microgrid sells energy as a service to customers, effectively turning a rural African village into a collection of hyper-efficient smart homes. Standard Microgrid's product is pre-paid, user-customisable energy service subscriptions for high value per kWh applications.

Legal information

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