

## Briefing Note

# IRENA Youth Talk – Entrepreneurship and Innovation for the Green Energy Agenda

8 October 2020 • 10 am – 12.30 pm (CEST) • Virtual

*Session co-organised by Initiate, SDG 7 Youth Constituency and IRENA*



### Background

Globally, young entrepreneurs play an important role in finding novel solutions to accelerate the energy transition, either by developing innovative technologies or ingenious business models. The creativity of young energy entrepreneurs is key to changing old paradigms, not only to decarbonise the power sector, but also to decarbonise the transport and industry sectors.

### Objective of the Session

The IRENA Youth Talk will bring together youth entrepreneurs and innovators in the renewable energy sector, to share their ideas and to discuss the role of their solutions in the energy transition including the challenges they are facing and how to overcome them. In particular, entrepreneurs will discuss their experiences in serving the transport, industry or building sector.

## Agenda

### IRENA Youth Talk – Entrepreneurship and Innovation for the Green Energy Agenda

Thursday, 8 October 2020 (10 am – 12.30 pm CEST)

#### Welcoming Remarks – Dolf Gielen, IITC Director, IRENA

#### Panel 1 – Renewable Solutions for Transport

10:00 – 11:15 **Setting the scene (5 min)**

[IRENA Video](#)

**Speaker:** Arina Anisie, Associate Programme Officer – Renewable Energy Innovation, IRENA

#### Innovation Showcase (35 min)

**Moderator:** Noortje van Heijst, Investment Associate, Unknown Group & VenturesOne

- **Innovation pitch 1:** Jorg van Heebeen, CBO, Jedlix (Netherlands)
- **Innovation pitch 2:** Kimosop Chepkoi, Founder & CEO, ECOBODAA (Kenya)
- **Innovation pitch 3:** Sasiranga De Silva, electric Tuk Tuk (Sri Lanka)
- **Innovation pitch 4:** Isaac Oyedokun, CEO & Co-founder and Esther Ehindero, COO, Trekk Scooters (Nigeria)
- **Innovation pitch 5:** Bhaskar Deol, CEO & Co-Founder, eDRV (Netherlands)

#### Questions & Answers (5 min)

#### Panel Discussion: Supporting Youth Innovation in Decarbonising Transport (35 min)

**Moderator:** Noortje van Heijst, Investment Associate, Unknown Group & VenturesOne

- **Panelist 1:** Philippe Vangeel, Secretary General, The European Association for Electromobility (AVERE)
- **Panelist 2:** Alexander Körner, Programme Officer, UNEP, Sustainable Mobility Unit, Economic Division
- **Panelist 3:** Bhaskar Deol, CEO & Co-Founder, eDRV
- **Panelist 4:** Sasiranga De Silva, electric Tuk Tuk

#### Panel 2 – Renewable Solutions for Industry and Buildings

11:15 – 12:30 **Setting the scene (5 min)**

[IRENA Video](#)

**Speaker:** Elena Ocenic, Associate Programme Officer – Innovation Networks, IRENA

#### Innovation Showcase (35 min):

**Moderator:** Joyce Mendez, Latin American Observatory of Geopolitics of Energy

- **Innovation pitch 1:** Vaitea Cowan, co-founder, Enapter (Italy /Germany)
- **Innovation pitch 2:** Dwi Rizky Rachmadhani and Ilham Gucci, founders, Okham (Indonesia)
- **Innovation pitch 3:** Esther Wanza, Energy 4 Impact (Kenya)
- **Innovation pitch 4:** Peter Paul van Voorst, co-founder, Skoon Energy (Netherlands)
- **Innovation pitch 5:** Jeremiah Thoronka, Optim Energy (Rwanda/Sierra Leone)

#### Questions & Answers (5 min)

#### Panel Discussion: Supporting Youth Innovation in Decarbonising Industry & Buildings (30 min)

**Moderator:** Joyce Mendez, Latin American Observatory of Geopolitics of Energy

- **Panelist 1:** Ernesto Ciorra, Chief Innovability Officer, Enel
- **Panelist 2:** Thaddeus Anim-Somuah, Engineering Manager Projects, Croda
- **Panelist 3:** Esther Wanza, Energy 4 Impact

## Innovation Pitches – Guidance for Youth Entrepreneurs

Please structure your presentation along the following guiding questions:

1. **Overview:**
  - What is the innovation about?
  - How does this innovation differ from other innovations in the field?
2. **Decarbonisation goals:**
  - What role does your innovation play in the long-term decarbonisation of the transport/ industry/ buildings sector in the community/country?
  - How does this innovation help renewables deployment?
3. **Impact:**
  - How does your innovation impact local communities or the society at large?
  - If possible, quantitative indicators for impact are welcome
4. **Advice:**
  - If you could give one piece of advice to other young entrepreneurs that are advocating for a green energy agenda in transport/industry/buildings, what would it be?
  - What can other young people do?

Format of the presentation: Max of 6 slides for a 5 minutes presentation (sharp)

## Innovation Pitches

### Panel 1: Renewable Solutions for Transport

**Jedlix** develops and operates a Vehicle-to-Grid (“VGI”) platform to optimize the charging & discharging of electric vehicles and facilitate their insertion into the power grid at scale. Jedlix teams up with Energy Partner, CPOs & SMSPS, car OEMS to reduce the total cost of ownership of Electric Vehicles, monetize the flexibility of their charging process on energy and balancing markets, and optimize the use of renewable energy.



**Ecobodaa** is a Kenyan startup founded by two Kenyan Engineers Kimosop Chepkoi & Juma Stephen to build zero emissions, connected, reliable, & efficient last-mile transport experience in Africa’s urban cities. With over 3 million motorcycle taxis in East Africa alone, combustion engine motorcycle taxis have become the biggest contributor of GHG emissions in the transport sector. Ecobodaa designs and assembles electric motorcycle taxis (commonly known as bodabodas in East Africa) which are then leased out to riders. Apart from building the electric motorcycles, Ecobodaa targets to build several battery swap stations to serve the entire city of Nairobi by end of 2021 to help push electric motorcycle adoption.



**Trekk Scooters** is a Nigeria-based modern transportation company solely leveraging improved and eco-friendly technology to redefine the traditional and arduous means of people’s movement within closed communities, i.e. university campuses and residential estates. Trekk is the pioneer of e-scooters sharing service in Nigeria, paving the way for micro mobility in Africa.



Trekk seeks to reduce the dependence on automobiles for short-distance transportation through an equitable distribution of e-scooters within communities. This is also aimed at providing a cleaner and healthier planet for future generations using renewable energy. Trekk provides fewer contact points making it easy to observe physical distancing – a safety measure occasioned by the COVID-19 pandemic.

**eDRV** provides software that makes it easy to manage EV charging as a commercial, residential or fleet business. It’s API-first architecture helps simplify the process of application development for electric vehicles and charging networks. eDRV works with any unlocked, network-capable charging station and enables advanced functionality such as demand response by utilities and easy integration with building management systems. Founded in 2019 by a team specializing in clean energy and mobile communications technology development, eDRV is headquartered in Amsterdam and is a part of the Rockstart Technology Startup Accelerator.



## Panel 2: Renewable Solutions for Industry and Buildings

**Enapter** is an award-winning company. It manufactures highly efficient, modular hydrogen generators using Anion Exchange Membrane (AEM) electrolysis. Its core technology has a 10-year proven track record. It is the foundation for the unique low-cost, compact electrolyser. Enapter's built-in Energy Management System uses monitoring and control software to manage the entire energy system. The electrolyser is already deployed globally, delivering energy independence to a broad range of sectors. It is used for transport, fuel for heating, energy storage, mobility and power-to-gas. Enapter has offices in Germany, Italy, Russia and Thailand.



**OKHam**, founded by Dwi Rizky Rachmadhani and Ilham Gucci, provides integrated services with Hi-tech equipment and highly skilled expert for renewable energy system problems by delivering one-stop end-to-end solutions to installation owners, government and residents. As a platform provider for IoT data aggregator, it can help to integrate renewable energy resources by providing both demand-and supply-side flexibility services to grids. From those data, predictive maintenance & performance monitoring of power plants could be performed effectively. Users can retrieve useful information about the power plant via a personalized web dashboard. Those will lead to customize analytics for better decisions and optimize performance.



**Energy 4 Impact** is a non-governmental organization that provides energy access through off-grid technologies and business development for women entrepreneurs in sub-Saharan Africa. Business development Services have proven to accelerate energy access to most off-grid communities. It offers up-skill training on entrepreneurship and how best to involve more women in energy value chains. As an energy business mentor, Esther Wanza has supported over 80 women with technical and business mentorship, so that their businesses could grow. It is her ambition to see more women in energy entrepreneurship. Knowledge transfer on some of the existing business models in the clean cooking value chains is critical. She wants to share the lessons learned from working with woman entrepreneurs in the rural areas of Kenya and some of the innovative technologies introduced to these entrepreneurs. One of the technologies introduced to these entrepreneurs is an energy-efficient cookstove which is not only fairly priced but also made from local materials and has superior performance characteristics compared to the majority of locally developed and produced stove models. The stove has been extremely helpful in reducing indoor pollution as it has been adopted at a high rate.



**Skoon Energy.** The world needs clean energy solutions; solar and wind power that is stored in batteries for when and where it is needed. Skoon launched the world's first online battery sharing platform to change this. We'll help you power film-sets, construction sites, parties, festivals, and even ships. With our two-sided marketplace, anyone can book clean energy and have it delivered anywhere.





**SKOON**

**Optim Energy**, developed by Jeremiah Thoronka, aims at solving energy access and environmental challenges. The Optim Energy prototype is an innovative piezoelectric device that harnesses energy from heat and vibrations, all of which naturally occur in the environment, to create affordable, accessible, and clean power. Optim energy devices use a digital technology that facilitates a two-way smart communication system between the production sites and the customers, and the smart grid system is made up of sensing materials to facilitate energy efficiency along the transmission lines. In-adding value to the current energy grid system, the Optim Energy Smart Grid (OESG) system is made up of automated control technologies, new and improved energy systems working cohesively with the national electrical grid system to respond digitally to the rapid change in energy demand in the community. This system has shown an unprecedented opportunity in moving the Sierra Leone energy sector to an era of energy efficiency, and make it a reliable energy sector that will instantly contribute to resolving the environmental and economic issues arising from the lack of energy access. In addition to this, Optim has also developed its Online Energy Efficiency Calculator (OEEC) with the aim of creating awareness on energy efficiency and energy literacy. If even we produce all the energy needed to keep the world going, without energy efficient practices and energy systems knowledge, there will be more GHG emissions, either in the electricity sector or in the end-use sectors. The calculator aims to solve this problem. Precisely, homes, factories, and commercial buildings will be able to calculate their energy usage efficiency and their energy losses from inefficiencies. They will also be able to talk to energy experts.

**OPTIM ENERGY**

## Speakers' Biographies

### Panel 1: Renewable Solutions for Transport

<p><b>Arina Anisie, Associate Programme Officer, Renewable Energy Innovation, IRENA</b></p>	
	<p>Arina Anisie is an Associate Programme Officer on Renewable Energy Innovation at International Renewable Energy Agency (IRENA) since 2017. She supports the innovation work stream in IRENA, focusing on innovations for integration of renewable energy in power systems, and electrification of end-use sectors.</p> <p>Prior to joining IRENA she worked as an energy analyst at PSR Energy Consulting and Analytics, a Brazilian based consulting firm. She is an industrial engineer and holds a MSc degree in Electric Power Systems from Comillas University in Madrid, and a MSc degree in Network Industries and Digital Economy from Paris Sud XI University.</p>
<p><b>Noortje van Heijst, Investment Associate, Seed &amp; Early-Growth Venture Capital</b></p>	
	<p>As a young professional in the energy sector, Noortje has a lot of affinity with innovation and startups. She obtained a MSc in Global Business and Sustainability at Erasmus University (cum laude). Her current work for Energy Investment Management BV is diverse and ranges from financial due diligence analysis of solar-, wind- and bioenergy projects, advising clean-tech startups, involvement in the Dutch Clean-tech Challenge and the Indonesian Energy Innovation Challenge.</p> <p>She also has experience in the startup industry at Get in the Ring (a global pitching competition for startups), Unknown Group (a technology scouting company) and Erasmus Centre for Entrepreneurship.</p>
<p><b>Jorg van Heesbeen, CBO, Jedlix</b></p>	
	<p>Jorg van Heesbeen is the CBO and co-founder of smart charging software company Jedlix. In his role Jorg is responsible for engagements with mobility and energy partners to grow the platform internationally. Before founding Jedlix, Jorg worked in energy trading and demand side management for Eneco, Autogrid Systems and Quby in both the Netherlands and Silicon Valley. Jorg holds a MSc degree in Energy Innovation Management from a combined program at Utrecht University and Columbia University.</p>
<p><b>Kimosop Chepkoi, Founder &amp; CEO, ECOBODAA</b></p>	
	<p>Kim is building electric motorcycles taxis for the mobile underserved in African cities starting with Nairobi, Kenya. A growth hacker at heart and an engineer by profession, Kim has 2 years' experience in the Kenyan motorcycle taxi industry and a long-standing entrepreneurial record. As a pioneer in the e-mobility space, he is involved in pushing policy and re-shaping last-mile mobility in Africa's urban space.</p>

**Sasiranga De Silva, electric Tuk Tuk**



Sasiranga De Silva is a lecturer at the Department of Mechanical Engineering at the University of Motratuwa Sri Lanka. His research interests include renewable energy, sustainable transportation to autonomous vehicles. He has held positions in government and private organizations in developing regulations and standardizing the transport sector. Sasiranga is also an automotive engineering consultant with his advice in demand both in Sri Lanka and internationally.

**Isaac Oyedokun, CEO & Co-founder, Trekk Scooters**



Isaac is the CEO and co-founder of the first e-scooters sharing company in Africa, Trekk Scooters. Isaac's burning passion for tech, innovation and renewable energy birthed Trekk Scooters. He hopes to improve the quality of living in Africa in the area of sustainable transportation by redefining transportation and promoting micro mobility. Prior to founding TREKK, Isaac worked in various capacities for CIRC (formerly FLASH) and DOTT. Isaac has double Masters in Accounting & Finance from the IAE Université Clermont Auvergne and in Development Economics from Ecolé d'Economie Université d'Auvergne with a focus on sustainable development where he also gained more insights into renewable energy sources and its benefits to Africa. He is an Alumnus of the prestigious Université Panthéon Sorbonne, France and Obafemi Awolowo University, Nigeria.

**Esther Ehindero, COO, Trekk Scooters**



Esther is the COO and co-founder of the first e-scooters sharing company in Africa, Trekk Scooters. Esther is passionate about redefining Africa's transportation system and promoting sustainable technological innovations. She started her career in Investment Banking. Her experience cuts across Financial Advisory, Asset Management, Strategy, Business Planning and Management Consulting. She is a process manager and product development specialist who have helped companies develop unique products in meeting clients' needs. Prior to founding Trekk Scooters, Esther served as the Acting Chief Operating Officer (COO) of Foretrust Consulting Limited and worked as a Consultant with Deloitte Consulting LLP, United States. Esther has an MSc in Technology Management from North Carolina A&T State University - United States, she is a member of the Institute of Chartered Accountants of Nigeria (ICAN) and a graduate of Economics, Obafemi Awolowo University.

**Bhaskar Deol, CEO & Co-Founder, eDRV**



Bhaskar is co-founder of Amsterdam-based eDRV — the an open API platform for electric vehicle charging infrastructure. Prior to this, he founded Mynergy — an advisory firm providing clean energy enterprises with access to finance. Earlier, he led India operations for the Natural Resources Defense Council (NRDC), a U.S. based environmental organization. His role involved engaging with clean energy companies, and the government to accelerate India's energy transition. At NRDC, he also played an active role in shaping India's national position in the Paris Agreement and the Montreal Protocol. Bhaskar holds a master's degree in chemical engineering from the Indian Institute of Technology Madras and an MBA from INSEAD.



**Philippe Vangeel, Secretary General, The European Association for Electromobility (AVERE)**



With great technology and brilliant people, Philippe Vangeel found his way as Secretary-General in one of the fastest-changing and growing technologies: electrical vehicles. An engineer by background, Philippe has always worked as a manager in the electronic sector. Preceding his role as a Secretary-General of AVERE (The European Association for Electromobility), he has worked an innovative entrepreneur in e-retails, security and the medical sector. He is fluent in five languages: his native Flemish, English, French, Norwegian and German.

**Alexander Körner, Programme Officer, UNEP, Sustainable Mobility Unit, Economic Division**



Alex Koerner is working for the Sustainable Mobility Unit of UNEP in Nairobi, Kenya. He is coordinating the Global Environment Facility funded GEF 7 Global Electric Mobility Programme. Prior to joining UN Environment, he worked at Potsdam Institute for Climate Impact Research (PIK), the International Energy Agency (IEA) and as a freelance consultant. He holds a Master's Degree in Power and Process Engineering from Technical University Berlin. The GEF 7 Global Electric Mobility Programme is set to implement demonstration projects, raise awareness & build capacity, develop e-mobility policies and establish business models & finance schemes for electric buses, light duty vehicle and 2&3 wheelers fleets in 29 low and middle-income countries word-wide. The GEF programme is partnering with the European Commission funded SOLUTIONSplus project, which aims at demonstrating innovative e-mobility solutions in 13 city projects around the world.

**Panel 2: Renewable Solutions for Industry and Buildings**

**Elena Ocenic, Associate Programme Officer, Innovation Networks, IRENA**



Elena Ocenic joined IRENA in 2019, to which she brings 10 years of professional experience in the public and private energy sector, including hands-on experience in solar photovoltaic project development. At IRENA she explores – among others – how innovations in enabling technologies, business models, market design and system operation can help IRENA members achieve their ambitious renewable electricity policy goals by mid-century.

**Joyce Mendez, Latin American Observatory of Geopolitics of Energy**



Joyce is a technoxamanist, TEDx speaker and sustainable activist working on transboundary cooperation in the water-energy-food nexus. MSc candidate Sustainability and Adaptation Planning by the Centre of Alternative Technologies UK. Co-Founder of several organizations like the Latin American Observatory of Geopolitics of Energy where she acts as the President of the UNILA (Federal University of Latin American Integration) Chapter with the organization Student Energy. The Youth Collective of the Parana Basin 3, and the Foz do Iguacu Educative & Environmental Observatory. In Paraguay she co-founded the National Youth Network for Water, and the Youth Network for Climate Action Paraguay, organizing since 2016 the National COYs (Conference of Youth on Climate Change). Joyce is a member of the World Youth Parliament for Water WYPW (also part of the Blue Peace Initiative, promoting water transboundary cooperation), and the Climate Reality Project Brazil.

**Vaitea Cowan, Co-founder, Enapter**



Vaitea believes hydrogen is the future of energy. After being named "Women Leader" in the World Bank Intern Program, and winning case competitions in University, she moved to Thailand. She met her co-founders in Chiang Mai and helped make the Phi Suea House a communication and collaboration platform for hydrogen in Southeast Asia. Shortly after, they co-founded Enapter, which scales decentralised green hydrogen solutions. The team has grown from 11 to 95 in 30 months. She has focused her energy on hiring more women, and inspiring the next generation of women. She is on the Forbes Under 30 in Energy 2020 list, and has won several awards for Enapter. Today she spearheads the marketing and communications efforts from Berlin. As a Pacific Islander, her mission is to provide clean energy independence to Polynesia. Vaitea holds a Bachelors of Commerce from the John Molson School of Business, Concordia University, Montreal, Canada.

**Dwi Rizky Rachmadhani & Ilham Gucci, OKHam**



Rizky and Ilham founded OKHam together which focuses on renewable energy projects in remote and rural areas. This movement was inspired by the energy problems that Indonesia is facing. They both have educational backgrounds in geology and petroleum engineering. The long journey in the fossil fuel industry has increasingly grown their interest in energy, and they eventually turned to renewable energy. They are members of the renewable energy association in Indonesia to discuss and exchange views on strategic issues in using renewable energy to serve the nation's interests and objectives to reduce reliance on fossil energy and to prevent environmental deterioration as a result of the unabated fossil energy usage. Currently, with OKHam, they are trying to develop and popularize the most promising renewable energy sources to electrify rural areas, where the vast majority of unelectrified individuals reside. They want to eliminate the problem of insufficient technical capacity in every unit by providing integrated services as well as remote monitoring performance of the units to decrease downtime and operating costs and get clean data from any plant system.

**Esther Wanza, Energy Business Mentor, Energy 4 Impact**



Esther is an accomplished Renewable Energy professional who is passionate about climate change mitigation, women empowerment through entrepreneurship and energy sustainability. Because of her strong belief in the energy sector as the driving force in bridging development gaps in Africa, she has a passion to develop comprehensive technical and regulatory frameworks for the industry. Esther has experience in designing and delivering renewable energy projects, solar photovoltaics, storage technologies, business development and creating awareness, and conducting training in the renewable energy sector. Currently, she is working as an Energy Business Mentor for Energy 4 Impact, a non-governmental organization that provides energy access through off-grid technologies and business development for women entrepreneurs in sub-Saharan Africa.

**Peter Paul van Voorst, co-founder, Skoon Energy**



Peter Paul van Voorst tot Voorst, founder of Skoon Energy, is active in the world of energy storage. Motivated to contribute to the energy transition, Peter Paul started the company with the goal to make clean energy accessible. By offering all services needed for the use of mobile energy through an intelligent online platform, Skoon Energy enables a wide range of users to transition to the use of sustainable energy sources. Skoon Energy focuses on facilitating access to mobile batteries for ships, film sets, construction sites, grid balancing and other applications with a temporary demand for energy.

**Jeremiah Thoronka, Optim Energy**



Jeremiah is an Experienced Renewable energy entrepreneur and scholar with a demonstrated history of working as an author and entrepreneur in the sector. As an entrepreneur, Jeremiah used his skills in science to develop Optim Energy, an innovative piezoelectric device that harnesses energy from heat, vibrations and weather, all which naturally occur in the environment, to create affordable, accessible and clean power.

Previously, Jeremiah worked with Innovate Salone, an organisation in Sierra Leone that organises a national innovation challenge for high-school-aged youth to develop their conceptual ideas into tangible solutions that positively affect their local communities. Jeremiah has interned with Renewables in Africa to Author articles on climate change, global warming, 4IR, policy development, entrepreneurship and renewable financing. Through these experiences, he developed strong project management and stakeholder engagement skills. Jeremiah is passionate about renewables, energy efficiency, climate change, youth engagement, innovation and entrepreneurship. Jeremiah is on a mission to rewrite the African energy access narrative by providing access to clean and affordable energy and by creating awareness through stakeholders engagement. He is a final year student at the African Leadership University (ALU), pursuing a BA Hons degree in Global Challenges with a focus on Energy and Climate Change.

**Ernesto Ciorra, Chief Innovability Officer, Enel**



Born in 1971, graduated in Business Economics at Bocconi University in Milan, magna cum laude, after many years of consultancy, he joined Enel on October 2014 as Chief Innovability Officer. Founder of Ars et Inventio (2003), a consulting firm focused only on innovation and creativity, he has supported many companies at designing and launching innovative products and services that have become popular worldwide. Nokia, Telecom Italia, Vodafone, Poste Italiane, Eni, GDF, Edison, the P&G Fater and Fameccanica joint-ventures, Unilever, RCS, Sole24Ore, BNP, Unicredit and American Express are some of the firms he cooperated with. Lecturer of Innovation Management in Italian and Spanish universities and business schools (director of the “Programa Avanzado de Gestión de la Innovación” at Instituto de Empresa de Madrid, professor and member of the Scientific Committee of the “Master in Innovazione Strategica” at Cà Foscari), he has also authored three collections of verses and a theatrical play acted in several theatres in Italy (in Milan, Bologna, Taormina and Siracusa). Professors Henry Chesbrough of Berkeley and Mark Kramer of Harvard have written two business cases regarding his activity as Chief Innovability Officer at Enel. The two business cases are available on [www.hrb.org](http://www.hrb.org) and are used in several courses at Berkeley and Harvard.

**Thaddeus Anim-Somuah, Engineering Manager, Croda**



Thaddeus is driving strategy, innovation and sustainability at Croda, a specialty chemicals manufacturer. He's part of the team leading the global decarbonisation roadmap to reduce Croda's operations emissions by 50% from 2018 to 2030 as part of their commitment to be Climate Positive. Outside of Croda, he's on the boards of European Federation of Chemical Engineering, Nederlandse Procestecnologen and AFBE-UK, as well as being highly active in GreenDeal4Youth, European Young Engineers and IChemE. This year Thaddeus was listed as Forbes 30 under 30 Europe for his contributions to Manufacturing and Industry.