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# MEET THE FELLOWS 2023

STUDENT**ENERGY**

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HILLARY ONYANGO

## MALI OIL

Hillary Reagan is a budding creative mind with a passion for social entrepreneurship. During his time as an undergraduate student at Moi University, Mali Oil was birthed at the Venture 4 Change Idea Competition 2022 as a solution to waste

management in open air markets in Kimilili Municipality, Kenya and other rapidly rising urban areas. Mali Oil seeks to produce sustainable bioethanol using agricultural residues from large farms, Agro- processing industries and municipal open air market-wastes.



SALLY RADUK



JOSHUA ODUOR

## TRANSITION 2050

The project title is “Catalyzing smart mini-grids through transport: Feasibility study of the off-grid areas” and aims to anchor itself in the energy transition to bridge the technology gap as well as the skills gap in the pathway to energy transition in the off-grid areas.

## SUSAN AKINYI

Ondiek Ten Top seeks to find a way energy is harnessed and utilized in the community. Currently, Ondiek Primary relies on firewood to prepare meals for its students, contributing to environmental degradation and the use of unclean energy sources. To address this, Ondiek Ten Top envisions to install installing a bio-digester, powered by organic waste from the community itself.



SUSAN AKINYI

## SOLAR PHOTOVOLTAIC SYSTEM FOR GREEN HYDROGEN PRODUCTION: A SUSTAINABLE SOLUTION FOR DECARBONIZING INDUSTRIES IN THE GLOBAL SOUTH

Gypson’s goal is to provide a feasible and scalable solution that can be adopted by various industries to reduce their carbon footprint and promote sustainable development.



Gypson Kurere



Jael Wafula

## OFF GRID SOLAR SOLUTIONS TO SCHOOLS IN RURAL KENYA

Jael Wafula’s project looks to sensitize rural communities (western Kenya) on solar energy as an alternative electricity source in schools and create ways of implementing these solar solutions, by engaging with school heads, school board of management and local government.

## ILLUMINATED MINDS

Irvine Koech is an Energy Engineer by profession, passionate about Energy Efficiency. Arnold Sawe is a Finance and Strategic Management professional. Arnold and Koech met while working on a UNFCCC Youth Policy Case Contest. They emerged as finalists with their policy case on “Addressing Climate Data Gaps Through the Use of Local Radio Shows to Influence Policy Making at the Devolved Government Level in Kenya”. Their project has a de-risking component through incentivizing educational institutions to implement renewable energy solutions in their processes with incentives (through financial support) from partners seeking to offset their carbon footprint through the purchase of Renewable Energy Credits or their equivalent.



Irvine Koech



Arnold Sawe



Heroine Omondi

## TILAH ENERGY

Herine is working on a project that seeks to promote affordable and sustainable energy access in remote settings to fuel socio-economic development by working with communities to co-design and implement sustainable energy ventures. This project entails setting up a demonstration plot for smart farming powered by solar to showcase the opportunities in adopting a Water-Energy-Food nexus and supply training to the locals.

## RENEWTECH

Trisha Malangalanga is a driven individual who has always been passionate about the environment, climate change, and nature. For the Fellowship program, her project aims to provide communities and individuals with easy access to information on renewable energy solutions, their associated costs, and payment options. By doing so, she hopes to empower them to make informed decisions about transitioning to renewable energy and to combat the impacts of climate change.

Trisha Malangalanga

KENYA



**KHAMIS MUNIRU, JILL AMONDI AND GIDEON OSORO**

### NISHATI SAFI

Khamis Muniru is a dedicated and ambitious electrical engineering student approaching graduation from Jomo Kenyatta University in Kenya. Jill Amondi is a student at Jomo Kenyatta University in Kenya pursuing a Bachelor’s Degree in Electrical and Electronics Engineering. Currently a Solar Field Engineer at Nirav Agencies. The team’s project is focused on a street food trolley that uses solar technology as an alternative to charcoal, to power the trolleys. They target the low-income street food vendors in Kenya to reduce their energy costs while eliminating use of carbon fuels. Ultimately, this solution ensures provision of safely cooked food to their customers. The team envisions being a recognizable brand in the renewable energy industry by delivering innovative solutions that have a positive environmental impact.

UGANDA

### CLEAN COOKING NOW

Catherine Zebia, a graduate of Agricultural Engineering from Makerere University in Uganda, East Africa, has a deep-rooted passion for SDG 7. Growing up in a remote village in Iganga District, East of Uganda, she witnessed the devastating effects of household air pollution caused by the widespread use of biomass-fueled cookstoves. She realised that women, children, and youth were the most vulnerable groups in the cooking chain, and this inspired her to develop a project aimed at improving the adoption and accessibility of cheap clean cooking technologies in Uganda. Despite several cheap clean cooking alternative interventions, adoption rates have been disappointingly low in Uganda. Catherine focuses on empowering women, children, and youth through capacity building, training, awareness-raising, and workshops, among other strategies, to make a significant impact on Uganda’s sustainable development.



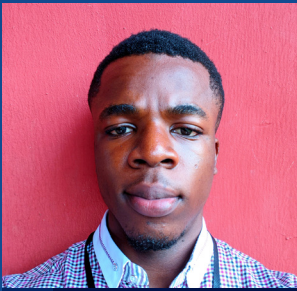
**ZEBIA CATHERINE NANKYA**

### ALFEX ENERGY

The research project on “Pyrolysis of a mixture of bio-waste to generate a low carbon emission fuel as a driver for a cleaner economy” aims to take a deep dive into pyrolysis findings regarding the conversion of bio-waste wastes into usable fuel to be able to run vehicles and trucks, with the objective of improving the study about waste in Kampala capital city regarding bio-waste distribution.



**ROCK AGON**



AMOS OLALEYE

### AMOWIN

Amos is a final year student of Mechanical. Amos's project aims to harness wind as a potential renewable energy source in Nigeria through the use of artificial intelligence to improve the efficiency of these energy sources. Therefore his project aims to explore and analyze vehicle-induced wind flow on the Lagos-Ibadan expressway and the possibility of installing a mini turbine to generate energy from vehicle-induced airflow to power streetlights and traffic lights.



CLIFFORD ANIAKOR

### MAPPING THE UNITED NATIONS SUSTAINABILITY DEVELOPMENT GOALS TO DIFFERENT RENEWABLE ENERGY TECHNOLOGIES TO REVEAL COMPLEMENTING AND COUNTERACTING EFFECTS

Clifford's research project aims to map the United Nations Sustainable Development Goals to Different Renewable Energy Technologies to Reveal Complementing and Counteracting Effects.



ANTHONIA OCHEI

### CLIMATE JUSTICE AND DISASTER RESILIENCE: ENVIRONMENTAL ENGINEERING THROUGH EFFECTIVE POLICIES AND SUSTAINABLE DEVELOPMENT

Anthonia's project seeks to create an impact by ensuring that governments of the world keep their obligations in the international covenants and ensure that people and communities most affected are not meant to suffer the inequalities caused. Her project will be embedded in human rights/welfare and security.

### CLIMRENEW

Climrenew aims to provide awareness of climate change by providing consultancy services on renewable energy, sustainable agriculture, and plastic waste while helping small business owners build sustainable products by connecting them with green tech solutions. As part of the project, Climrenew aims to provide corporate advice on energy utilization, provide sustainability plans for industries and businesses, and help design projects that can suit energy needs in a more sustainable manner.



NAPHTALI AKUDUNG





ISRAEL APEH

## INERGY

Through “iNERGY” Israel aims to tackle access to energy and energy poverty, to help his local community by teaching, carrying out energy campaigns and making solar-powered lamps that will spur the interest of the kids to see education as a potent tool for individual and nation building.



NNENNA HUMPHREY

## TEAM 23

Nnenna’s project combines geothermal carbon capture and storage (GCCS) with AI-enhanced wellbore design to enhance energy production and facilitate CO2 sequestration. And her focus is on exploring the potential for CCS technology deployment in the Niger Delta region.

ZARA’U ALI ZARGU

## ZARA’U ALI ZAR’GU

Zara’u’s project aims to produce bioethanol from agricultural waste to help some of the challenges that accompany agricultural waste, burning and utilizing it for the production of fuels with low carbon emission.

## SOLAR POWERED ABSORPTION REFRIGERATION SYSTEM

Ayomide work promotes clean energy usage in Nigeria and West Africa, through research and knowledge creation in the field of renewable energy, as well as the deployment of solar technology for electricity and cooling, which currently serves over 100 users.



AYOMIDE OGUNGBEMI

## OLUWANIFEMI OJO

Oluwanifemi aims to map out how “How can Nigeria’s education system be better utilised in unleashing innovative energy technology solutions.” This reinforced her choice of the project which is on educating senior secondary school students on energy transition in relation to the most urgent global challenge (Climate Crises).



OLUWANIFEMI OJO



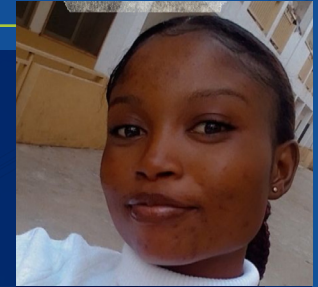
**NENECHI CHIWETALU**

## MICROBIAL DEGRADATION OF DYE WASTEWATER USING MICROBIAL FUEL CELLS

Chiwetalu is a fellow with a background in Applied Biochemistry from Enugu State University of Science and Technology (ESUT). She delved into bioenergy for her Masters program in ACEFUELS- African Center of Excellence in Future Energies and Electrochemical Systems, under a scholarship from World Bank. Chiwetalu strongly believes that clean, affordable and reliable energy is possible in every sphere of the Earth, which will inevitably mitigate climate change through her project focused on microbial degradation of dye wastewater using microbial fuel cells with a simultaneous generation of bio-electricity.

## INTEGRATED SOLAR POWERED WATER SUPPLY AND PURIFICATION SYSTEM: IMPROVING AFFORDABLE CLEAN WATER SUPPLY TO HOUSEHOLDS IN URBAN AND RURAL COMMUNITIES

The project idea comes as a result of the poor household quality drinking water challenges in Nigeria, as actions and support have been inadequate or non-existent over time.



**Janet Ojeniyi**



**Kabir Atobatele**

## CLIMATE TECHNOLOGY SOLUTIONS

Climate Technology Solutions creates blockchain-assisted Intelligent Energy Management System software that monitors and predicts energy usage to balance the consumption and distribution of renewable energy to ensure the lowest levelized cost of energy (LCOE) possible. With their work, they aim to contribute to the fulfilment of Sustainable Development Goals.



**CHIZOBA NZEAKOR**



**HAYATUDEEN MUSTAPHA**

## BACHIROU, HASSANE, MOHAHAMED AND RAYANATOU

The idea of the project is to produce tomatoes in greenhouses using the solar irrigation system throughout the year, except for the months when tomatoes invade the market. Through this project, they expect to contribute to overcoming these challenges, the temporary scarcity and the cost of tomatoes, by producing them and making them available to the population of Niamey.



**IDI MAHAMAN AMINOU RAYANATOU**



**ISSIFI MOHAMED**



**IBRAHIM TANIMOUNE HASSANE**



**DJIBO BOUBE BACHIROU**



**MUHAMMAD ABDULKARIM**

## LIGHTING UP NIGERIA, ONE COMMUNITY AT A TIME

Muhammad's project idea is a digital solution which seeks to bridge the gap in sustainable energy access in Nigeria and globally. It is a platform that hosts a wide range of sustainable energy products and services that address the issues of climate change and some key UN Sustainable development goals. This inturn will make it easy for customers to choose the most suited sustainable energy product with the best quality and pricing without the hassle of going to the market blindly.

## UOMA SOLUTIONS

Chinonso is the CEO of Uoma Solutions, a climate technology firm that uses community-driven solutions to promote inclusive economic development in Africa while addressing climate change. He is passionate about achieving net zero carbon emissions and ending hunger in Africa, leads talks about including vulnerable populations in the sustainability sector, such as small-holder farmers, women, youths, and rural communities. With his project working on recycling of plastic waste and electronics waste to make solar powered lamps and home systems.



**CHINOSO IHUOMA**



**OLUWAFUNMILOLA OLOYEDE**

## SUSTAINABLE MINDS

Climate Education is a project meant to tackle the bridge gap between people and climate crisis, as climate education has received little attention, although the Climate Crisis remains an urgent global issue. Therefore through this project, the team can enlighten people about climate change, its effect and mitigation and how they can reduce the climate crisis.



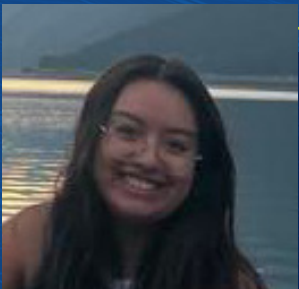
**KAOSARA ADEKUNLE**

## SOUTH EAST SUSTAINABLE ENERGY FOR ALL NIGERIA

SESEFA (South East Sustainable Energy for All) is based in Ebonyi, Nigeria, and is focusing on providing affordable and sustainable renewable energy solutions by installing stand alone solar pv for their clients. The team's target is to increase the number of people using stand alone solar pv to 50 users in South East Nigeria in 2023 and over 150 by 2025. By implementing the SDG7, the team hopes to provide the stand alone solar through "BNPL" package (Buy Now, Pay Later) where home and business owners will be able to own stand alone solar pv with at least 30% upfront fee and the rest spread-out in 12-24 months.



**EMMANUEL EKPAI**



**RIDWAN ABDULAZIR**

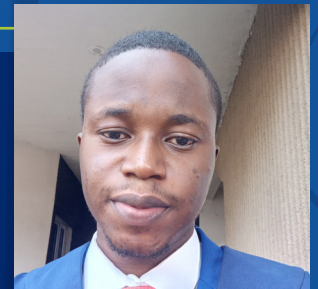
## RIDWAN ABDULAZIR

Ridwan Abdulazir's project aims to implement microgrids in remote areas to enhance the lifestyles of those without access to renewable energy sources, including indigenous communities. The project's primary objective is to research

and mitigate existing challenges, increase access to renewable energy, and improve energy reliability, thereby ameliorating the living standards within rural communities.

## ECOGREEN INITIATIVE

ECOGREEN INITIATIVE is a project that seeks to promote land rehabilitation & remediation of organic pollutants from exploration sites. This project will evaluate the possible management practices that can be adopted to mitigate the current and potential future environmental impacts of climate change.



**ADURAGBEMI IBIRONKE**



**OKAFOR LOVETH**

## LOVETH OKAFOR

Okafor Loveth is currently a master degree student in Renewable and New Energy Systems under Africa Center of Excellence program, both in University of Nigeria Nsukka. She is passionate about SDG 7, 8 11 and 13 and is looking to advocate and create awareness of some abandoned non-edible oil seeds that can be used for biofuel production, which will be important for transportation and heating.



**GANIYU BABATUNDE**

**OMIWOLE FELICIA**

**ANIBABA HAFSAH**

**OKE KOLADE**

## FLAIR

FLAIR is a team of undergraduates from the University of Lagos with an interest in clean energy, climate change and reduction of carbon footprint. Their project looks to minimize the impact of flaring from the oil and gas sector in Nigeria, a common practice used to dispose of excess natural gas by burning it off. Flaring is used for various reasons, including safety and operational requirements, but it also has a significant environmental impact. Project flair is aimed to reduce the flaring of gas in Nigeria and promote the proper utilization of natural gas.

## ADVANCING CLEAN ENERGY ACCESS IN DISPLACED PERSONS CAMPS

Precious Bernadette Esogbue works to advance clean energy access and climate solutions in Africa. As a Research Associate, Energy Access at the Clean Technology Hub, Precious develops projects and strategies to empower women through the adoption of clean energy technologies, where she manages the Clean Cooking and Livelihoods Program portfolio. Precious holds a degree in Law from the University of Benin, Nigeria. Her project is focused on developing and implementing clean energy access solutions for displaced persons living in camps or informal settlements. This could include the deployment of solar lanterns, solar home systems, or other decentralised renewable energy technologies tailored to the needs of displaced communities.



**PRECIOUS BERNADETTE ESOGBUE**



**CHIDINMA ODUENYI**

**DANIEL OGUEJIOFOR**

**CHIOMA UKOHA-KALU**

**JOHN ACHIMUGU**

## TEAM BOLSTER

Team Bolster is founded by students of the University of Nigeria, Nsukka. Together at Bolster the team is committed and motivated to play a role in creating efficient energy systems. To help achieve this, the team is developing a digital platform called Bolster, which serves as an intermediary between consumers and the nearest plastic waste recycling centers. The goal is to inculcate a culture of waste collection and sorting while promoting the growth of recycling agencies. Through

the widespread and consistent utilization of this application, we aim to establish a sustainable environment, decrease greenhouse gas emissions, and stimulate the creation of new products and materials.



**OLUWAFERANMI BALOGUN**

## GREENANALYTICS

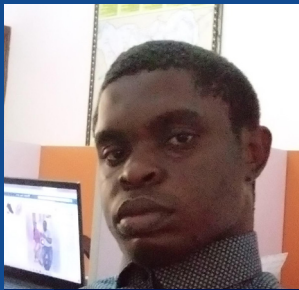
Greenanalytics is an ESG consulting firm that offers services such as environmental audits, environmental and social impact assessments, corporate sustainability and climate change, sustainability reporting solutions and ESG assurance services. And is aimed at helping companies on their sustainability journey.



**NANA ESI POBEE-QUAYNOR, PLANGAN DAMSHAKAL, AND SAMANTHA SALIMU**

## FUTURE FUEL FEMMES

Samantha Salimu, Nana Esi Pobee-Quayno, and Plangan Damshakal are three young women from Zimbabwe, Ghana, and Nigeria, respectively, who are passionate about improving energy access in rural Sub-Saharan Africa. They are tackling the problem of dependence on firewood for cooking fuel by working to make biofuels accessible to rural communities. Their project idea is to use their expertise in technology, including GIS tools and media, to analyse the most suitable sites for the commercial cultivation of the Jatropha plants used for biofuel production, hoping to make the production process more efficient and cost-effective by pinpointing the best locations. They are aiming to create an awareness tool to educate rural communities on the potential of these plants and their other economic values.



**NDIFREKE SAM**

## EDU-ENERGY

Ndifreke Sam is a graduate of Physics, from Federal University of Agriculture, Abeokuta, Nigeria. During his second year of studies, he was introduced to a course “Energy and its

environment”, which inspired him and increased his love for Energy and Education. Focusing his project in bringing electricity to schools across Sub-Saharan Africa, according to UNDESA in December 2014, 90% of children go to schools that lack electricity and collectively, 188 million children attend schools that are not connected to any type of electricity supply. However, revolutionising school electrification to clean energy encompasses accessibility to affordable and modern energy (SDG 7.1) & (SDG 7.2).

## GREEN MOTHER INNOVATIONS

Zulqarnaini is an MSc. Carbon Management student at the University of Edinburgh, UK and an assistant lecturer in the department of Chemistry at Shehu Shagari College of Education, Sokoto, Nigeria. Through learning and reason, he has come to understand that true knowledge is that which benefits. That is how he came to study climate change and then venture into energy. Zulwarnaini is currently running a small scale business in the renewable energy sector. Green Mother Innovations provides solar installation services and energy efficiency consultancy. The vision for the business is to make energy accessible to all classes of society by providing curated community-based solar financing structures to help assist people in Nigeria surmount the challenge of high capital cost of this reliable energy source. He also intends to become a large scale energy generation company dealing with combinations of different renewable energy sources readily available in the region.



**ZULQARNAINI MALAMI**



**NAOMI MAXWELL**

**OLUGBENGA EZEKIEL**

## ZEROE

Zeroe is a startup that’s on a mission to transform the energy crisis and waste management dilemmas facing not just their country, but the entire world. With a team of highly-educated and passionate founders, they’re harnessing the power of waste-to-energy technology such as anaerobic digestion, along with other energy solutions to facilitate energy security, clean cooking and safe waste management practices. This innovative approach tackles energy poverty head-on, while addressing the critical waste management problem and promoting sustainable, climate-resilient cities.



OMOKO ABIMBOLA CHUKWUDI

ESAN OLUWADAMISI

OLUDELE OLAITAN

## SUCSYD

SUCSYD is a team project targeted to bridge the gap between the Oil Industry and the Renewable Energy Industry to allow both industries to work together towards a clean and sustainable future. A simple example of things they plan to achieve is finding more sustainable ways to transport produced gas to the shore and cease flaring; consequently reducing the carbon footprint caused by flaring.

The team hopes to act as a conduit to both industries and ensure that the energy transition is done sustainably and meets the energy demand in Nigeria.



CHIDINMA OKEREKE

FRANK EGBA

## PLAXTRIC

PlaxTriX looks to accelerate the net-zero target set for Sub-Saharan Africa and mitigate the effects of climate change in the area. The team looks to achieve this by developing a low-carbon technology solution that drives on non-biodegradable material and a renewable

energy mix - particularly solid wastes that pose a threat and great challenge to the environment - to generate quality, affordable and reliable energy.

## ECOLAKE POWER INITIATIVE

Ibrahim's project idea of designing and simulating a solar mini station to electrify both urban and rural communities intends to not only supply clean energy but also address the core causes of insecurity and climate change. With the project, he intends to supply the community with a sustainable and economical source of energy by harnessing the power of the sun. The EcoLake Power Initiative reflects his vision for a brighter future. He hopes to bring to his community through the EcoLake Power Initiative, illuminating a way toward a more safe and more sustainable future.



IBRAHIM MODU AJI

## SUNSWITCH

Gift Muoneke is the co-founder and CEO of Greenera Technologies, a fast rising energy startup that enables access to electricity in rural communities. His startup has directly impacted over 200 small businesses and homes since inception and growing. For the Fellowship program, his project looks to create a platform that allows the public to fund and earn from solar projects in Africa and enable businesses to get solar power at zero upfront cost. You can learn more about his project at [www.mysunswitch.com](http://www.mysunswitch.com).



GIFT MUONEKE





**CHISOLA NYALA,  
NGOSA BWALYA**

## ZUBA POWER

“Zuba Power - Solar solutions for a sustainable Zambia” is a project aimed at enhancing access to and affordability of renewable energy through rural electrification in Zambia, employing three approaches: decentralized solar microgrid technical solutions, renewable energy education and training, and renewable energy financial consultancy services. Zuba Power presents an opportunity for the government and other stakeholders to work towards a net-zero carbon economy by decarbonizing the grid and adopting renewable energy options, hence helping mitigate and adapt to the impacts of climate change.

## CREATING A CIRCULAR ECONOMY IN ZAMBIA: RECYCLING RENEWABLE

Inutu Katoti is passionate about renewable energy and sustainability and is working on a project to ensure a circular economy is established in her country, Zambia, as there currently isn't a sustainable way to dispose of their electronic waste. The end goal of this project is to ensure that each town in Zambia has at least one recycling site for green energy equipment.



**INUTU KATOTI**

## NAMIBIA



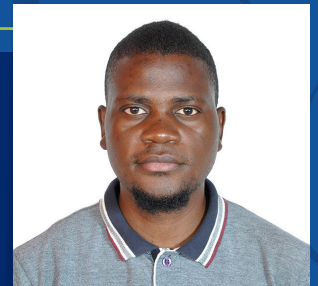
**WILHELMINA KAMATI**

## WILHELMINA KAMATI

Wilhelmina's research project aims to highlight the the major challenges the Electricity Distribution industry faces as the world transition to Renewable Energy, which can lead to possible loss of revenue when self-generating customers disconnect from the Grid.

## HAMLET MUKUWE

The project aims to determine the limitations of renewable energy in Zambia especially in rural areas. Especially because, hydroelectric Power is hugely affected by climate change i.e drought, there is a need to diversify to other sources of energy that can sustain us even for the years to come.



**HAMLET MUKUWE**

**EDDIE SIMENYE  
MWANGWEWO**

## SWIFT E-MOBILITY LIMITED

Having graduated with a Masters Degree in Energy Science, equipped with knowledge and skills in renewable energy, Eddie has an appetite for knowledge in the energy sector and hopes to translate this knowledge into tangible solutions that will benefit his community and the world at large. For the Fellowship, Eddie is exploring electrical vehicle (EV) solutions for his community in Zambia.

## NOVA ENERGY

Precious is a 26-year-old Zambian female with a chemical engineering bachelor's degree. Precious is behind Nova Energy, a startup aiming to provide clean and sustainable energy solutions with a particular aversion to Lithium-Ion batteries for the e-mobility industry and also for clean energy storage in homes, enterprises and beyond. It takes a project approach to various green energy solutions with tailor-made aspects catering to specific needs of unique audiences. The startup aims to include as many groups of people as possible to the energy transition.



**PRECIOUS CHILEKWA**



**ELLEN CHIDEMO**

## ELLEN CHIDEMO

Ellen's goal is to develop cutting-edge solutions that leverage AI, to optimize energy storage systems, making them more efficient, reliable and cost-effective.

With a deep desire for continuous learning and self-improvement, she is uniquely positioned to tackle the complex challenges facing the industry today.

## SWIFT E-MOBILITY LIMITED

Having graduated with a Masters Degree in Energy Science, equipped with knowledge and skills in renewable energy, Eddie has an appetite for knowledge in the energy sector and hopes to translate this knowledge into tangible solutions that will benefit his community and the world at large. For the Fellowship, Eddie is exploring electrical vehicle (EV) solutions for his community in Zambia.

**EDDIE SIMENYE  
MWANGWEWO**



**BOUA SIDOINE KADJO**

## GREEN WAY TRANSFO

Kadjo is passionate about environmental management and renewable energies, through his research ideas in Waste-To-Energy, he started a start-up in high-added value waste valorization, called GREEN WAY TRANSFO, which is currently

incubated at the World Bank African Centre of Excellence in High Added Value Waste Valorization (CEA-VALOPRO) of the INP-HB. His project is to valorise agricultural and agro-industrial waste into biofuels, compost and biopesticides.

## PENDA AND VANESSA

The team's project idea is to train and sensitize people on today's energy challenges mainly the transition to clean energies, energy efficiency and energy saving with regards to climate change mitigation in order to overcome the mental and social barriers in the achievement of sustainability.



**PENDA FALL**

**AMALAN EVORA  
VANESSA KAKOU**



**DIMITRI TIENTEGA**

## SOLAR TECHNOLOGIES FOR SUSTAINABLE AGRICULTURE

Dimitri Wendpayangdé TIENTEGA is an engineer in applied solar technologies and passionate about actions against global warming. He founded in 2019 the association of Young Energy Actors, the first youth organisation specialised in renewable energy in Burkina Faso. He accompanies farmers with smart solar technologies allowing them to practise precision agriculture in order to boost their yields while progressively eliminating the use of gas and diesel powered motor pumps.

## ZACKARIA SAWADOGO DJASNDIAL TENODJI

The general objective of their project is to build a 1 MW thermal storage system using local materials. The main goal is to promote Concentrated Solar Power Plants (CSP), encourage the development of thermal energy storage systems at the expense of electrochemical storage (batteries), and help accelerate the energy transition.



**ZACKARIA SAWADOGO**



**DJASNDIAL TENODJI**



**KHUTSO FENYANE**

**TSHEPHO MAKGALE**

## TSHEPHO & KHUTSO

The team will be working on developing an energy-tracking system for households and various organizations. Because South Africa is currently experiencing load-shedding which affects households and business operations, their solution will be focusing on helping customers reduce their energy consumption, project their utilities, integrate energy-efficient appliances, maintenance of their appliances and induce a transition to renewable energy sources.



**DELROY KUTE**

## WAVEWATT

Delroy Kute is a passionate Environmental Scientist with over seven years working experience in the chemical, construction and electricity generation industries. His team's project idea is to set up an electricity generation plant that harnesses the power of waves through the use of wave energy converters on the shores of South Africa.

## MICRO WIND TURBINE FOR COMMERCIAL/ RURAL UTILISATION

Bhekani is pursuing a Master's degree in Energy Studies from the prestigious University of Johannesburg. He is also working as a technical intern for the South African Wind Energy Association. With a strong passion for sustainable and environmentally conscious solutions, Bhekani is determined to make a positive impact on the world through his work in the renewable energy sector with a particular focus on the latest developments in wind energy technology. Bhekani's dedication to his studies and work is matched by his enthusiasm and drive to make a meaningful contribution to the field of renewable energy.



**BHEKANI NTULI**



**JOSEPHINE  
TWENEBOAH KODUAH**

## PROMOTING THE USE OF RENEWABLE ENERGY BY SMES IN GHANA (RE4SME)

Josephine decided to undertake a project to increase awareness of the economic and environmental benefits of renewable energy adoption among small and medium-scale enterprises (SMEs) in Ghana. Therefore, her project focuses on advocacy and awareness creation of Renewable Energy Technology options available for SMEs.

## HYDRO-GREEN TECHNOLOGIES

The project shall centre on producing green hydrogen from solar energy and water. Their project seeks to showcase the sustainable production of green hydrogen and ammonia from renewable sources, demonstrate green hydrogen applications, and pilot a green hydrogen economy.



**KOKOUTSE GAWOU**



**FAUZIA TANKO**



**JOSEPH AMOAH**

**IFEOLUWA AKOMOLAFE**



**FATOUMATA TOUNKARA**

## JAE MALI

Fatoumata is an electrical and energy engineer with interest in energy projects particularly on renewable energies. In January 2023 with the Young Expert Programme, she joined FRES MALI as a young expert. Fatoumata also leads the association JAE MALI (Jeunes Acteurs de l'Énergie), which aims to enhance the contribution of young people in achieving energy self-sufficiency in Mali. The country has a strong potential in biomass from agricultural transformation, that is why the idea of the project is to propose to the Malian population, an alternative sustainable and clean fuel with agricultural residues that can replace wood and charcoal.



LIONCEAU CLOVIS AGRE

## SAFE EARTH AND NETFARM

With a Degree in Fundamental Physics and a Master’s Degree in Mathematical Physics, Lionceau AGRE is currently studying for a Master’s Degree in Artificial

Intelligence and Big Data. He is also the founder of youth for Safe Earth and netfarm, platforms for the protection of the environment through gamification and the collection of weather data. Currently working on his project with his team on the development of an autonomous and transportable solar power strip for hiking.

## SOMALIA



AHMED ABI ABDI WARSAME

## POWERUP

“PowerUp”, is aimed at addressing the problem of frequent power cuts in remote cities, aims to provide a sustainable and long-term solution to this problem by using renewable energy sources, through the use of a combination of solar, wind, and hydropower

sources to generate electricity. The project will involve the installation of solar panels, wind turbines, and hydroelectric generators in strategic locations throughout the city.

## GILLES-CHRIST ADJAGAN

Financier, Pan-Africanist, Environmentalist, Gilles-Christ ADJAGAN is passionate about leading a brighter future for Africa and for Benin. Gilles-Christ believes that African youth in particular must participate in discussions and collective or individual actions in favour of sustainable development. His dream is that the African youth can contribute to the construction of a united Africa, stronger by its institutions and its culture. Gilles-Christ’s career goals include becoming a businessman, creating the first green bank dedicated to sustainable development projects in Africa.



GILLES-CHRIST ADJAGAN

## GREEN BIOFUEL

Green Biofuel is a startup which consists of providing modern and sustainable energy to women agro-processors and households at a relatively low price. Our green charcoal solution under the name “Akàn Zômanchi” is the product of a technology proven effective by a recent study that was conducted by our team.



MAHUTONDI CÉDRIC AGBESSI

IYABO ANGÉLIQUE GNONLONSA



**KHAN SONIA TEWAH**

**NJIMOLUH FOMBAN**

## SUSTAINABLE ENERGY TRANSITION AMBASSADORS (SETA)

ETA is a team of 5 members from the University of Buea with an Environmental Science background and a passion for the Energy transition. The team is a derivative of the Student Energy Chapter at the University of Buea. SETA's project looks to promote the energy transition by conducting research on renewable energy technologies, developing educational resources and campaigns to raise awareness about the issue, and designing and building their own small-scale renewable energy systems.

**ISMAEL MAJER**

**FOLA THALYA DELORIS**

**NICK ANYE ATANGA**

**NDZELEN SALOME**

## THE ÔRAURE INITIATIVE

Assibi is a young professional graduate in Geological Sciences of the Earth and holder of a Master 2 specialised in management of companies active in renewable energy. She is currently working as a waste management trainer for an NGO in Lomé, Togo. This project consists in setting up decentralised mobile or fixed green energy production units in rural and peri-urban areas of Togo using livestock and agricultural waste. It contributes on the one hand to the achievement of the objective n°7 of the SDGs in a vision of global access to sustainable, reliable and affordable energy by 2030, and on the other hand to contribute to the fight against climate change. Through this initiative, access to electricity in rural areas will increase the success rate in schools and the creation of income-generating activities through electricity to increase their income.



**ASSIBI ROSALIE GADO**



**ELIZABETH KANANJI AND ELIZABETH NYANJA**

## EL-SOARTECH

El-soarTech is a team of two engineers passionate about improving the energy sector through renewable energy. El-soarTech is working on optimizing the efficiency of solar modules by accounting for the losses encountered during absorption of solar radiation due to reflection and the stationary position of the solar panels. We aim to come up with an alternative design that would maximize absorption through tracking the sun's position and capturing the reflected irradiance.



**SMITH VITUMBIKO NTHAKOMWA**



**VICTOR NGWIRA**

## JEHOVAH'S SOLAR COOPERATION

The Jehovah's Solar Cooperation (JSC) is a clean energy and sustainable agricultural production focused non-profit non-governmental organisation founded in November 2022. Their mission is to transition Karonga District of northern Malawi from its primitive rain-fed agricultural production system to extensive solar irrigation agricultural production system in 24 years. The team seeks to resolve the issues faced by the

community by vigorously implementing several potential solutions to reduce the effects of climate change in Karonga district with a focus on adaptation to climate variability and energy related impacts through reduction or avoidance of greenhouse gas emissions, improvement in energy efficiency and energy conservation and increased clean energy supply.



**MOSES PROMISE NTHAKOMWA**



**BOSTON KHONJE**



**PRECIOUS MAFUNGA**

## RURAL SOLAR MINI GRID PROJECT

Precious Mafunga is a Malawian 2018 graduate of Lilongwe University of Agriculture and Natural Resources. Currently he is working on a project focused on a rural solar mini grid project. According to available data, only 15% of Malawi's population have access to electricity, meaning that the majority 85% do not have access and most of these live in rural areas. He is seeking to implement a rural solar mini grid project which will improve access to clean, sustainable, and reliable electricity to businesses, households, schools and rural hospitals. This project idea, if implemented, will create jobs for both women and youth, improve social, economic, health and education outcomes in the targeted beneficiary rural areas.



## ALE

Jacinto, Antonio, Camila, Fernando, and Joao, form a Mozambican organisation, with the aim of creating

links for the interconnection of young people and actors in the energy sector, with a view to accelerating universal energy access and guaranteeing a fair and sustainable energy transition. With their project, they seek to create a link for the interconnection of young people and actors in the energy sector with a view to elevating the role of young people in decision-making and capitalising resources to support energy solutions led by young people.



CAMILA LUZIA



FERNANDO MASSUNDA



JOAO MATOS



JACINTO SITEO



ANTONIO MAUSSE

## BIOMASS BRIQUETTES

Alphonse John Haruna, graduated from Ardhi University with a bachelor's degree in environmental science and management in 2021. Regina Kilima is a graduate in environmental science and management. The team's project idea is to produce briquettes from agricultural waste. Briquetting can be defined as the process of compressing together carbonaceous material, mainly with the addition of binder material. Biomass briquettes are of greater advantages as briquettes intended to provide an easier way of accessing energy supply for domestic applications especially in cooking.



ALPHONCE HARUNA



DORICE AMBROSE



REGINA KILIMA

## MEET THE FELLOWS 2022

## MOROCCO



**MARYEM ZENNO**

**WALID MOUACHA**

### ECOREFRESH

Maryem and Walid aim to design and implement a series of solar powered drink distributors in the urban center of Tinghir, Morocco. They hope to provide coffee and other drinks to the urban working population of Tinghir through this sustainable solution that will include an app that informs the administrator of the distributor about the remaining quantity inside.

### OLD TECH

Looking toward the future with an eye for sustainability, Hala is bridging the latest technology with old construction techniques for her project, creating a restoration of a Kasbah in Fes, Morocco. She has already created the 3D model and aims to design a traditional system complemented by solar panels while still respecting the authenticity and aesthetics of the heritage building.



**HALA LAHLOU**

## AFRICA

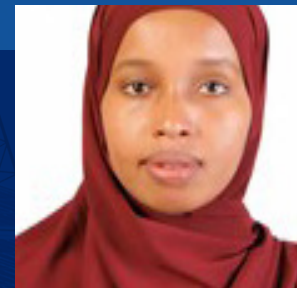
### TEAM W2E

Team W2E's project is titled "Artificial intelligence driven Biogas Production from Food Waste" and aims to use food waste from markets, farms, or any biodegradable waste to produce cheap cooking gas for the residents of Maiduguri in Borno State, Nigeria.

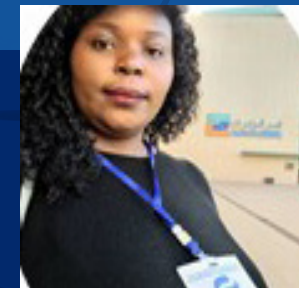
The use of artificial intelligence will help in optimizing the biogas plant through real time monitoring thereby predicting hazards and production rate even before it occurs, while the slurry waste from the biodigester will be sold to the rural farmers as fertilizers at a very cheap rate to increase their productivity.



**ISA BALOGUN**



**PRIMROSE VURAYAI**



**PRIMROSE VURAYAI**



**ZULYKHAT BUKOLA WASIU**

**HAFSA MOHAMED IBRAAHIM**



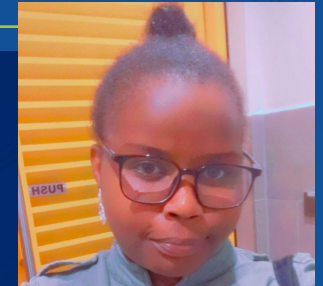
FRANCINE NGIRENTE

## NGIRENTE FRANCINE

Francine NGIRENTE is a graduate from University of Rwanda with a bachelor's degree in Water and Environmental Engineering. Francine's project aims to raise public awareness about environmental and climate change action while educating students in primary and secondary schools. This initiative will help close the knowledge gap in the transition to renewable energy sources and ensure that environmental sustainability is achieved.

## UKULIMA+

The project with the tagline 'Agriculture for better livelihoods' aims to improve and transform the lives of farmers in her community, through an IoT device for farmers to use while preparing for plantation by measuring the soil components to determine the right crop to grow and the method of farming they should employ for that planting season.



CYNTHIA NEKESA



GRANNY LESIAMANG

## IMPACT INNOVATORS

Granny is the founder of Clauseph Enterprises - a social enterprise with a vision to industrialize rural communities through eco-friendly, sustainable and scalable manufacturing projects to impart practical change. The team is working on providing clean, reliable and accessible heating and cooking fuel to rural and suburban communities that still heavily rely on firewood. The team intends to do this through manufacturing of clean, solid biomass fuel (wood pellets, charcoal briquettes) from encroacher bush and manufacturing of energy efficient biomass stoves for complimentary use.



MAHIMA, SHARMA & PRANAY

## MAHIMA, SHARMA & PRANAY

The team, are interested in the said topic due to the fact that this area still continues to be largely untapped even though the availability of an abundance of sunlight in maximum parts of the nation. The potent energy through sun radiations is mostly untapped and radiates back producing no impact. Thus, to bring the potent loss of sun radiations to Mass usage, we intend to dig deeper in this area through this project.

## WASTE TO WEALTH: TRANSFORMING FARM WASTE INTO BIOGAS AND FERTILIZER FOR SUSTAINABLE INCOME IN RURAL INDIA

Through his project, he hopes to tackle the waste management problem while simultaneously boosting the circular economy in rural areas. Sidhant's project aims to turn waste into wealth by using co-digestion to create biogas and slurry for fertilizer. The project highlights the interconnectedness of environmental, social, and economic issues in rural India.



IDHANT KRISON



SRUJAN GUPTA

## PURVASRI & SRUJAN

The team identified the lack of reliable access to electricity in semi-rural communities in India, which impacts the quality of life of residents but also hinders economic development and growth. To address this issue, their project aims to provide a decentralized source of electricity to these communities through the use of bush burning and biogas.



PURVASRI DAS



**SHEIKH SUHAIL  
MOHAMMAD**

## DEVELOPING SOLAR PV-BASED CRITICAL POWER SUPPLIES SUPPORTED THROUGH ENERGY STORAGE SYSTEMS

Sheikh's objective is to learn, implement and develop new technology in Renewable Power and Energy sector. This will help in the transition towards clean, affordable, reliable and secure power for all. It will not only allow people to participate in Energy and Power markets, but this transition is key for human survival.



**ERASTO BEBEGO  
FUNDICHUMA**

## CHARACTERIZATION AND UTILIZATION OF AGRO-PROCESSED BIOMASS FOR CLEAN COOKING SOLUTIONS IN TANZANIA

Erasto aims to become a reputable renewable energy expert in addressing community energy through problem intervention in Tanzania, his home country, and elsewhere by utilizing a variety of platforms that have a significant impact on his career. Amongst other subparts of sustainable resources in Tanzania, he still sees that access to clean cooking has continuously become a problem for the majority of Tanzania; however, the government itself has tried to show up, and still, more efforts are required to replace the traditional cooking methods.

## INNOVATION FOR CLEAN COOKING

The Innovation for Clean Cooking project aims to solve the global challenge of clean cooking for the 2 billion people who lack access. The project's objectives are inclined towards working on the fuel side; to design locally sourced biofuels and establish women-led small enterprises which produce biofuel using a hand-operated machine, improving fuel efficiency and reducing drudgery, smoke, and health impacts.



**ARPIT KAUR**



**KRISHNA VAMSHI  
RAJALINGU**

**SUSHMA KATA**



**SHERYL SHAINA PRASANNA**

## NIZAMUDDIN & SHERYL

Their project is based on how to use hydrogen fuel cells as an alternative to fossil fuels, as this process is highly efficient and produces zero harmful emissions, making it an environmentally friendly energy source. One significant benefit of hydrogen fuel cells is their versatility.



**NIZAMUDDIN ILIYAZ**

## GROWING PERILS: THE LEARNING OF WEAPONISATION OF TRADE THROUGH ENERGY MARKETS

Dyuti's project is inspired by Rebecca Harding's book, "Weaponisation of Trade" and through her project, Dyuti hopes to further research in this area that can allow her to come across solutions that can help neutralize energy as a weapon in trade.



**DYUTI PANDYA**



**ASHWIN NORONHA**

## ASHWIN NORONHA

Ashwin is a material scientist with aspirations of building a social enterprise around agriculture and waste management. He aims to build a SYSTEM to utilize agricultural residues for energy applications. In the short term, he wants to create a supply chain to economically bring waste to a central treatment facility, and in the longer term, he wants to get funding to set up Chemical recycling biorefineries to manufacture fine chemicals.

## SUBARNA SUBEDI

The project is about gaining more knowledge about the key obstacles to the adoption of electric cooking and how to overcome them successfully, by encouraging the government to make necessary policy changes so that the Nepalese people will embrace more environmentally friendly cooking practices, as Nepal is lagging behind the adoption of electric cooking as most people still use conventional biofuels and LPG.



**SUBARNA SUBEDI**



MUNTAHA ANJUM



SYEDA FARDEES FATIMA



SYED MUHAMMAD AUNALI

## THE THERMAL TITANS

The Thermal Titans aim is to promote the use of renewable energy sources, such as geothermal energy, to reduce Pakistan's reliance on fossil fuels and mitigate the negative impact of climate change. by exploring and developing a project to fully assess how Pakistan can utilize the country's geothermal resources.

## JORDAN

## RAISE AWARENESS OF CLIMATE CHANGE

BAYAN ISSA

Bayan is helping to raise awareness of climate change in her community through a series of workshops that she organizes in school, universities, and community centers frequented by mothers, as well as virtual workshops. So far, the workshops have covered topics such as organic fertilizers and vermicompost methods as well as broader climate change implications for their community.

## PAKISTAN



IBRAHIM AFRIDI

## GREENOVATION

The Greenovation team aims to create a platform that makes it easy for individuals and institutions to invest in climate-friendly projects and support the transition to a low-carbon economy, by using blockchain technology to provide a one-stop shop for investors who want to finance the transition to a low-carbon economy



NIMRA ARSHAD

## NIMRA ARSHAD

Nimra's research work aims to revolutionize the energy sector's landscape by developing clean and sustainable energy solutions to meet the world's demands, by taking an interdisciplinary approach of Energy Systems Engineering, through the production of clean Hydrogen through the splitting of Hydrogen from Water using SMR, Small Modular Reactor.



INGRIITY

**FIONA TJANDRA BUNNARDI, HAYFA FELICIA TAQIA WIJAYA, AND OCTA PRASETYA**

## INGRIITY

Fiona, Hayfa, and Octa are first year students of the Bandung Faculty of Technology at the Bandung Institute of Technology. Their team wants to focus on research on the use of heat waste management in industrial machines. They intend to develop an integrated system that uses wasted energy (heat) to become the energy source that runs a machine. The team's area of interest is optimising industrial systems for maximum production with existing resources, focusing on one particular industrial machine that generates the most heat waste and then optimising its efficiency by using said wasted energy (heat).

## ADNAN HASYIM WIBOWO

Adnan Hasyim Wibowo is a bachelor's degree student in geophysics at the Faculty of Mathematics and Natural Sciences, University of Indonesia. His project is focused on developing an Archimedes screw, a tool that is practically used to lift the flow of water from a low place to a high place, which is usually used on ship hulls and highlands that are not reached by water. The mathematical concept of the Archimedes screw uses Archimedes' force with the factors of fluidity, gravity, and volume of matter. This project will be implemented in rural areas—especially in areas with a geographical position at a high elevation, seeking to have a major impact on the electric lighting of village streets as well as ponds and/or residents' rice fields as well as local tourism.



**ADNAN HASYIM WIBOWO**

## GAWIREA

Girls and Women in Renewable Energy Academy (GAWIREA) is an initiative aiming to equip women of Samurukie Village with basic knowledge of renewable energy while implementing a real project to give better access to their basic needs and boost their productivity. Their areas of interest range from alternative and contextual education, food security, and entrepreneurship; all wrapped up and supported with our background in renewable energy to help empower women in rural communities.



**ALVIN PUTRA**



**ANGELINA YOSEPHINE**



**ANDI ROSITA DEWI**

**ASRATUL HASANAH**



MALAYSIA



AININA SOFIA ADNAN

**LIGHTS ON:  
ENERGY  
ACCESS**

The Lights ON: Energy Access project in Malaysia seeks to promote

energy access and equity among urban communities by educating Malaysians about the importance of affordable and reliable energy for rural communities. Lights ON aims to empower all communities and create a platform for meaningful dialogue towards achieving a just energy transition in Malaysia, with a focus on dignified livelihood among different communities, especially minority groups.

SOUTH KOREA



INZIAM UL HAQ

**REDUCTION OF  
GREEN HOUSING  
GASES (GHGS)  
EMISSION IN THE  
CONSTRUCTION  
INDUSTRY**

Inziam Ul Haq's research focuses on reducing greenhouse gas emissions from the construction industry, from the beginning stages of cement manufacturing to the maintenance of infrastructure as the cement industry alone is responsible for about 7% of global GHGs, while the building industry is responsible for approximately 28% of CO2 emissions in the construction sector. Inziam's work seeks to provide green, affordable, eco-friendly, and sustainable construction solutions to reduce greenhouse gas emissions and meet the demands of the public for facilities to support daily activities.



ABDOALNASER  
IBRAHIM

## RE-IMAGINING ENERGY TRANSITION FOR DEVELOPING COUNTRIES, HYDROGEN FOR MOBILITY AND DECARBONISATION

Abdoalnaser Ibrahim's project looks to investigate the current state of energy transition in 3rd world countries and help reimagine better alternatives through the development of a set of policies to improve energy access and achieve energy justice especially for regions like sub-Saharan Africa. His project also looks to dive deep into the topic of hydrogen to help mitigate climate change through the promotion of this technology.

## THOROUGH ANALYSIS OF RENEWABLE ENERGY TECHNOLOGIES AND THE TRANSITION TO 100% RENEWABLE ENERGY DEPENDENCE

Adrian Riives project idea is a comprehensive research project on how to transition modern society to a fully green renewable society. This review will include analysis of currently available infrastructure for new technologies, financing new technologies, political hindrances to these new technologies, and the potential of emerging renewable technologies.



ADRIAN RIIVES

## UNDERSTANDING CANADIAN ENERGY POLICIES & UNCOVERING OPPORTUNITIES IN ENERGY AND NATURAL RESOURCES

Bryan Yau is currently a 4th-Year Juris Doctor/Master of Business Administration candidate at the University of Toronto – Faculty of Law and the Rotman School of Management. His project focuses on educating Canadian young professionals about energy policy, industry dynamics and opportunities in Canada's natural resources sector to help deepen the conversation in Canada and build off his interest in learning more about the intersection of business, policy, energy, and climate change.



BRYAN YAU



**BRAYDEN SONNY WHITE**

## RATITSENHANÓNHNHA

Brayden Sonny White is of the Bear Clan of the Kaniehkaha:ka/Mohawk Nation and lives on the Akwesasne Mohawk Territory. Brayden currently works with Haudenosaunee Communities to help them combat environmental issues as well as serve as a liaison between environmental organizations. For the Fellowship program, his project looks to bridge the gap between traditional knowledge and the understanding of renewable energies. “For a good amount of time, renewable energy has not been viewed with a traditional lens and many older folks will say it is a western system of power. I say that renewable energy is closer to our traditional values than anything else”.

**PATASHI PIMMS**

## UYÚ S

Patashi Pimms is a Nlakapamux, Yakama, & Stl’atl’imx youth from TLKEmchEEen (Lytton BC). Patashi’s project looks to create temperature adaptive greenhouses that are able to grow foods in extreme temperatures and create space for knowledge keepers to share their wisdom of growing and processing food/medicines and make harvesting traditional foods and medicines more accessible.

## FEMI DADA

Femi is a Mechanical Engineering student at the University of Saskatchewan. While pursuing his studies, he noticed that there was a lack of interesting and engaging resources for students and new industry professionals to learn about Canadian energy policy. With his passion for the industry and commitment to education, Femi is determined to bridge the knowledge gap and make energy policy accessible to all. His team’s project idea is to create a website which aims to educate students and new industry professionals about Canada’s energy policy in a clear and accessible way.



**FEMI DADA**

## SWISH

Miswar is a first-year master’s student at the University of Waterloo. He has received multiple awards and is a published author researching in renewable energy, energy storage, green hydrogen, and ammonia. Miswar is the cofounder of Swish, a cleantech startup developing a cost-effective product to clean solar panels in a sustainable and economical way without the use of water or expensive cleaning robots. He is an IEEE member, Student Energy Fellow, member of the Waterloo Institute for Sustainable Energy (WISE), and a TEDx Speaker.



**MISWAR SYED**



ABDULJALEL WADOUH

KAREIM YOUSSEF

RHENALDI WIJAYA

MURAD TASHKANDI

IBRAHIM HASHMI

## THE UNIVERSITY OF CALGARY CHAPTER

This team consists of 5 engineering students from the University of Calgary Student Energy Chapter. The team aims to improve the usability of solar panels by designing a device that can be installed alongside the solar panels that will automatically clean them after a snowfall. Living in Calgary, Alberta, the sunniest city in Canada, the team believes that solar panels have a lot of potential, but are currently hindered by winter snowfall. In future iterations, they believe the device can be also useful in sandy conditions.



SERENE SEBASTIAN

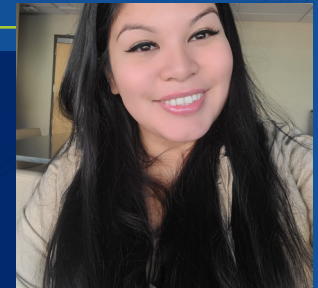
## SERENE SEBASTIAN

Serene's research project will combine her interest in policy analysis and her passion to respond to climate change, by identifying efficiencies in the transportation sector. The research will highlight the opportunities of transitioning to an ecosystem that uses

renewable energy and less oil or gas to meet Sustainable Development Goals. In addition, Serene's research will recognize the barriers countries and governments may face to transitioning towards an energy efficient transportation sector.

## SOARING PRAIRIES

Jana Sasakamoose is the first ever First Nations woman accepted into the Math and Stats and is hailing from Ahtakahkoop First Nation. Jana's project looks to develop an energy efficient year-round greenhouse to promote food and energy sovereignty in the community and at the local school. The main goal of Jana's project is to reclaim ancestral knowledge, offering traditional teachings through gardening, hide tanning, medicines, Elders circles, and Ceremonies.



JANA SASKAMOOSE

## NADIA BAHERI

Growing up in Alberta, Canada, Nadia identified rampant greenwashing and became disillusioned with instances of "green" initiatives that acted as a smokescreen for further perpetuated harm. To help prevent corporate greenwashing, Nadia's project is twofold: 1) evaluating climate initiatives end-to-end (or "cradle to grave") to assess overall environmental impact - from sourcing of materials and manufacture to end of life disposal, and 2) utilizing this information to enable impactful change to be made through public policy.



NADIA BAHERI



**TANNIA  
VIJEYENTHIRAN**

## **PAINTING THE NEIGHBORHOOD GREEN - HOW CLIMATE GENTRIFICATION FURTHER EXACERBATES DISPARITIES AMONGST EQUITY DESERVING GROUPS**

Tannia has a background in Health Policy and International Development from the University of Toronto. Tannia's research looks to ensure the adverse health impacts of displacement attributed to climate change is mitigated and accounted for. She hopes to achieve this by unpacking the relationship between an individual, community and place, and how the relationship is subject to change based on socioeconomic status and climate change. The end goal is to develop an action plan for diverse populations to advocate for urban renewal strategies and be agents of change within their own communities.



**SHADRAK GOBERT**

## **TEAM SHAK**

Shadrak (Shak) Gobert is an Indigenous (Frog Lake, FN, Treaty 6) IT specialist who currently works in the field of local Government Technology Transition for community development departments. Shak's project looks to adapt burgeoning tech for "Digital Twin" assets, by using Building Information Systems (BIM) modelling (VR, AR, XR) for small, and large, infrastructure projects in the field of energy. The "Digital Twin" combines various concepts, technologies, and data sources to give a clear, meaningful view of the subject and show how it can and will change over its lifespan.

## **ZHIRONG CHEN**

Ficus Innovations is a company that is dedicated to building climate resilience and promoting sustainable development. Ficus's mission is to create affordable and sustainable communities that are able to respond quickly to disasters and provide relief to those in need. To achieve this goal, their project is a techno-economic analysis that looks at the possibility of building 100% renewable and affordable communities in rural areas of Canada, integrating geothermal, solar and wind energy as energy systems, and incorporating geologic carbon sequestration in the community.



**ZHIRONG CHEN**



ARAVIND GANESAN

## ORGANOPOWER

Aravind Ganesan's project looks to voice out key developments in the Canadian bioenergy sector by considering one of its provinces,

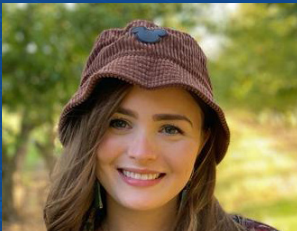
Ontario, for studies exclusively related to biogas systems. Its current production and future potential is analyzed in detail via thorough literature survey, systems analyses, and expert advice. Leveraging this knowledge, the utilization of biomethane (separated from biogas) for developing a biorefinery concept in Ontario inclusive of the production of hydrogen (H2) and renewable biofuels (e-fuels, biooil, etc.) will also be explored.

## VOICES OF THE TRANSITION: CONVERSATIONS WITH FOSSIL FUEL

Megan has a background in environmental sustainability and global development. Megan's project idea is at the intersection of Just Transition and Canadian fossil fuel workers. A Just Transition is all about centring the voices of workers and ensuring no one is left behind in an energy transition. She is interested in understanding the perceptions and understandings of Just Transition policies among those who engage in fossil-fuel intensive industries.



MEGAN DEVOE



LAURA HOHMANN

## GREEN ENERGY SUPPLY CHAIN INITIATIVE

Laura Hohmann is the Associate Director of Sustainable Supply Chains at CDP North America. At CDP she oversees the strategy

and engagement with the UNFCCC, 120+ buying corporations and their ~30,000+ strategic suppliers on climate change mitigation, water security, and deforestation. For the Fellowship program, her project is to launch a Green Energy Working Group which intends to drive better energy disclosures and provide a unique convening space for a multi-stakeholder audience, which includes customers, suppliers, and utilities.

## JAMES PAEK

James Paek has a background in political science from the University of Georgia for Bachelor degree and earned Associate degree from the University of North Georgia.

James realized the energy system needed a structural overhaul since experiencing the COVID-19 pandemic and fallout of the Ukraine war that has created an urgency to propose alternative energy methods that are affordable, reliable, and accessible to ordinary Americans. His project looks to craft a sustainable energy policy that supports alternative energy methods to meet the guidelines on SDG 2030.



JAMES PAEK

MEXICO



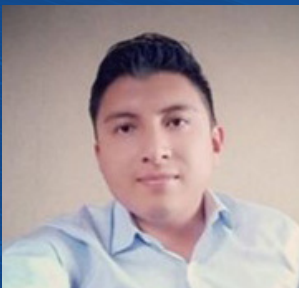
**DIEGO ALEJANDRO REYES RAMOS**

## THERMAL BATTERIES

Diego Reyes is working to collaborate with organisations and communities to develop IT tools that enable better monitoring and management of energy consumption, as well as tools for citizen participation to increase community involvement in

energy sustainability efforts. He has also studied the development of thermal batteries that can store energy from renewable sources, reducing the reliance on fossil fuels, focus of the project he is working on.

ECUADOR



**JOSÉ LUIS TITUAÑA GUALOTO**

## K'RONA

Jose Luis's areas of knowledge and interest are the energy sector, Sustainable mobility, quality and data management. K'RONA is an APP that seeks an agile, safe, efficient and comfortable mobility throughout the Metropolitan District of Quito through

the use of private shared vehicles and thus face the great challenges of the city such as traffic, air quality, transition to more sustainable transport, and others. A tool that aims to provide solutions in shared mobility to increase the average occupancy vehicle and strengthen community links between inhabitants of the same sector.

COLOMBIA



**JENNIFER ANDREA OCHOA PRIETO**

## JENNIFER ANDREA OCHOA PRIETO

Jennifer is an Environmental Engineer with more than seven years of experience in the pharmaceutical, post-consumer waste, health care, and manufacturing sectors. She also is a specialist in Environmental Law and Master in Environmental Law and Management. She has achievement-oriented skills for the projects she has undertaken, and is a helpful, creative, proactive and dynamic engineer. Her project is focused on biogas generation from animal manure or waste for the generation of electricity in a vulnerable municipality in Colombia.

JAMAICA



**CLAYTON BOLTON**

## CLAYTON BOLTON

Clayton Bolton has extensive experience in youth engagement, Art and Science of Youth, Mandated Reporting, and knowledge of Social and Behavioral Research Best Practices for Clinical Research. His project is dedicated to harnessing the power of policy development to respond to climate change.



**SOFIA LUNA QUISPE**

## SOFIA LUNA QUISPE

Sofia Luna Quispe is a 19 years-old climate and gender activist, and an anthropology student at Universidad Nacional Mayor de San Marcos.

Currently, she's part of organisations such as Re Earth Initiative, Ollas Sostenibles, Latinas For Climate,

and was elected as representative of the metropolitan city of Lima at the Youth Environmental Commission of Peru, where she is also the youngest member. Her project is focused on the water-food-energy nexus strengthening grassroots action and climate resilience in peripheral sectors of Lima. Especially, focusing on those sectors located in fragile ecosystems or with no access to biodiversity and basic services.

## NAUTILUS

Gomer and Kevin are both from Nuevo Chimbote, in Peru, both bachelors in Energy Engineering.

Both being classmates at the university, they understood that they could become agents of change by seeking to introduce renewable energies in fishing activities, to positively impact the reduction of polluting emissions and the energy transition for the city. Typical boat systems use diesel engines for main propulsion. Furthermore, traditional vessels have not had significant technological advancement for many years. They believe it is necessary to introduce renewable energy to small-scale fishing, so for their project, they want to investigate the possibility of charging battery electric boats at fisheries using solar energy.



**GOMER DAVID LAVADO PALACIOS**



**KEVIN ACERO RONCAL**



**LIA CETERA AND NELLY CETERA**

## ENERGY FOR HUMANITY

Lia Florencia Cetera is a 19 year old Argentinian student of Environmental Sciences at the University of Buenos Aires. Nelly Julieta Cetera is a 22 year old Argentinian woman studying International Affairs. Their objective is to help vulnerable communities develop energy autonomy so that they can improve their standards of living, having a reliable energy source for cooking, the sanitation of water, and other basic household activities can greatly contribute to a family's health conditions and overall life quality. For the project, they plan to use solar energy creating hand-made solar panels from disposable materials to provide a heating system for water.



BRAZIL



MAHIMA, SHARMA & PRANAY

## CLIMATE CHANGE AWARENESS PROGRAM

Luiz Felipe graduated as a Mechanical Engineer from the Federal University of São João del-Rei (UFSJ) in Brazil and works as an Associate at Boston Consulting Group (BCG). His project focuses on bringing discussions about Climate Change to university students by getting through the main topics of Climate Change, from the Phenomenon, Causes, Impacts, and Solutions (Adaptation and Mitigation). This project is based on IPCC reports and aims to bring the discussion to a local level by supporting the participants to feel how they are suffering from Climate Change or will suffer if the world does not manage to contain it. As an outcome, this program aims to incentivize students to get into a career in sustainability and be decision-makers in favour of the Climate Action Agenda.

TRINIDAD AND TOBAGO

## ENERGY CLUBS

Stefon Ramsubhag is an Electrical and Computer Engineer from the University of the West Indies, St. Augustine in Trinidad and Tobago. His project idea is to foster educational awareness about the global energy transition and the energy systems context in Trinidad and Tobago by targeting secondary school students, hoping to inspire students to form energy clubs in their school and reach out to their communities on speaking and sharing guidance on topics of energy. He sees this as a measure to help guide and comfort consumer energy behaviour in a dynamic energy environment where implications are likely to arise. Stefon also plans on collaborating with the school energy clubs to hold fundraisers and partner with solar energy providers to sponsor solar, energy efficient and smart products to households in need.



STEFON RAMSUBHAG

## BIOENERGY PROJECT

Jashobeam has a strong sense of social and environmental responsibility and hopes to acquire much experience and knowledge through the process of developing this Bioenergy Project. This project will involve the development of a Biogas Digester System on the University of the West Indies' (UWI) farmland. The biogas digester would mostly utilise animal and plant waste materials as feedstock.



JASHOBEAM KING



RAYANN GILBERT

## BIOREACTOR LANDFILL IN TROPICAL CLIMATES

Rayann Gilbert is an aspiring environmental engineer with interests in environmental journalism. She has a background in Environmental Science and Sustainable Technology which she majored in at the University of the West Indies, St Augustine Trinidad. She has made it a professional goal of hers to gear her research and future endeavours towards promoting waste management on her island as well as the idea of circulation, where nothing becomes waste as the waste is used to create energy via its production of methane gas or biomass. Thus, the Caribbean Waste to Energy Project (CWEP) – Chaconia X is something she is well invested in. She is seeking to focus her research on Green Engineering, Waste to Energy, the ultimate design for a bioreactor landfill in Tropical Climates.

## BAHAMAS ENERGY STORAGE SYSTEMS

Lorenza has a background that spans from electrical engineering to project management. He is currently an engineer at The Bahamas Power and Light Company focusing on the integration of renewable energy onto the utility power grid. As photovoltaics create solutions, problems will arise due to its intermittent nature. Therefore, the integration of energy storage systems onto the grid will become a vital part of the clean energy transition solution. Lorenza's goal through his Fellowship Project is to gain a deep insight into the electrochemical and chemical storage technologies. Thus, allowing the continued integration of resilient microgrids throughout the islands of The Bahamas.



LORENZA CAREY



OMONIYI AKINPELUMI

## GRIDML

For the Fellowship, Omoni's project GridML aims to leverage on machine learning (ML) algorithms and statistics in addressing large grid network issues in selected sub-Saharan countries based on data

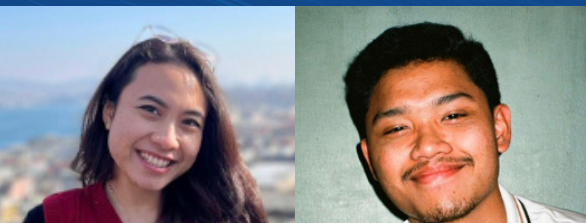
availability under the following areas – forecasting supply/demand and network reliability assessments. He hopes to develop probabilistic models that would help system operators determine where and when renewable energy plants should be built relative to demand projections.



ALI AKBAR YAGHOUBI, SEYED ALI ALENABI, VANOOSHE GHAZANFAREE

## ENERGY REBELS

With the goal of finding a sustainable approach for securing water, energy, food, and environment, Energy Rebels is working to provide a better design for their faculty building by integrating renewable energy technologies and implementing vertical farming. The aim of this project is to provide sustainable food and energy on campus and design a system that could be scalable for larger designs.



ABRAHAM OCTAMA HALIM, ANANDA DEWI, NAUFAN AJI SESIA FITRI ANISA

## GREEN SHIFTERS

Green Shifters aims to fight climate change by developing a framework for Small and Medium-sized Enterprises (SMEs) to transition towards more sustainable practices in their supply chain, having observed a lack of synergy between SMEs and policymakers in managing energy transition. Their project focuses on energy justice, aiming to provide a framework for SMEs in Indonesia (especially in the agriculture and fishery sectors, which make the biggest contribution to Indonesia's economy) on how to use sustainable materials and renewable energy, conduct clean manufacturing, and improve waste management.



KOAMI KPOTO

## AFRICAN ENERGY RESEARCH PLATFORM

Koami's project consists of building a platform giving the state of energy access of African countries based on relevant indicators. This project aims to help decision makers, NGO's, and the international donor community to have an accurate view on energy access in Africa as well as the energy transition level of individual countries so that one could quantify the remaining work to do.

## DIGITAENERGY

Ajmal's project aims to revolutionize the way we use energy through the application of digitalization, employing a data-driven approach to analyzing building data collected from various sensors. By collecting and analyzing this data, the "Smart World" project seeks to identify energy usage peaks and provide recommendations on how to avoid these peaks and extreme energy usage, further promoting sustainable energy practices and reducing energy consumption.



AJMAL



LARISSA JANE HOUSTON

## ACCESSING COMMUNITY ENERGY (ACE)

Her Fellowship project - "Accessing Community Energy (ACE)" - aims to develop a network and database of energy communities (ECs) from across the globe to advance and promote the sharing and exchange of knowledge around ECs and energy access utilizing renewable energy. The database will contain an overview of ECs related legislation and frameworks from countries worldwide thus improving opportunities and insight into EC establishment, maintenance and reporting.

## BRIDGERS

Shubham's Fellowship project "Bridgers" is focused on bridging the knowledge gap between youth of the Global North and Global South, facilitating a shared learning environment. The idea behind "Bridgers" is to build up on available processes and structures around existing programs and partner with organizations such as the Swedish Environment Institute to increase their outreach.



SHUBHAM SETHI



**PRAJWAL SHANDILYA  
MULLUR GURUPRASAD**

## GFA (GREEN FOR ALL) — SUSTAINABLE AND RENEWABLE ENERGY BASED COMMUNITIES

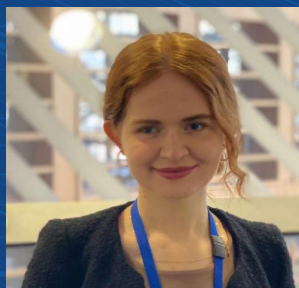
Having a student-level experience in Microgrids, Prajwal is developing a model which will connect all people in a selected community to renewable energy as well as other sustainable technologies such as biogas and composters which can be produced with kitchen waste. The GFA project tries to explore the ways in which youth from developing countries and regions around the project sites can be involved in order to give them work experience.

## ALGERIAN GREEN HYDROGEN PATHWAY

Mohamed is currently working on a techno-economic study that will analyze the pathway the Algerian government must take to establish a green hydrogen industry, identify the obstacles, and suggest possible solutions. His project aims to highlight the role that green hydrogen can play globally as the next energy carrier, particularly in fields like industry and transportation.



**MOHAMED BAHMANI**



**KATARÍNA GRÁCOVÁ**

## CARBON TAXATION

Katarína's project is intertwined with her studies on European carbon taxation and primarily targets the new legislation of the EU Carbon Border Adjustment Mechanism – a highly complex measure which connects various policies, with an expected significant impact not only within the EU but also outside it.

LEARN MORE ABOUT THE FELLOWSHIP PROGRAM:  
[WWW.STUDENTENERGY.ORG/PROGRAM/SE-FELLOWSHIP-2023/](http://WWW.STUDENTENERGY.ORG/PROGRAM/SE-FELLOWSHIP-2023/)

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