

TRANSFORMING ENERGY ACCESS - LEARNING PARTNERSHIP

PROJECT LEADER: DR JISKA DE GROOT



IMPACT SUMMARY

The Transforming Energy Access - Learning Partnership (TEA-LP) combines three elements of energy education and access - Masters curriculum enhancement, continuing professional development (CPD) courses and industry networking - to create and support a highly qualified workforce that can drive the transition to affordable, sustainable, modern energy for all, in line with Sustainable Development Goal 7 (SDG7). TEA-LP includes African, South Asian and Indo-Pacific universities and other stakeholders. It is part of the broader TEA research and innovation platform.

Masters students undertaking energy education programmes at TEA-LP partner universities have benefitted from the supported curriculum enhancement. Support includes funding, as well as technical and marketing support, the sharing of expertise between partners and the facilitation of training and lectures by energy companies. To date 875 students have been enrolled in associated MSc programmes across all three regions.

Three accessible, online, asynchronous CPD courses have been designed in collaboration with industry-leading experts: Future Female Leaders (FFL); Integrated Energy Systems (IES); and Integrated Data Energy Analytics (IDEA). This has benefitted 22 cohorts in 34 countries: FFL, 403 students; IES, 70 students; and IDEA, 81 students. The University of Cape Town provides academic certification and the courses are accredited by the Engineering Council of South Africa. To facilitate the sharing of resources, expertise and knowledge TEA-LP has established a strong network of professionals involved in the energy and off-grid energy sectors, higher education institutions and research centres, which has expanded the ecosystem of Southern expertise. Academic staff at partner universities benefit from training and networking opportunities, as well as access to platforms for presenting research at international conferences and a network that has fostered collaboration and new initiatives.



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To date, 97 academic staff at member universities have participated in train-the-trainer training activities, enabling them to implement and localise the TEA-LP curriculum. Additional training has also been offered on HomerPro, a computer software programme that is widely used in the energy sector.

UNDERPINNING ACADEMIC WORK

A scoping study in 2017 and 2018 set out to establish the short and long-term needs for capacity building in the energy sector, identifying initiatives and institutions that could help develop the skills and expertise needed to achieve and sustain the scaling up of energy access. It also looked to address gaps in local research and innovation, professional development and vocational skills, and to design a programme of support.

The study's findings highlighted a short-term need to upskill recent graduates, as the programmes they graduated from did not fit the needs of the energy access sector, and a much more pressing, long-term need to train and 'deliver' a pipeline of graduates across several energy-access-related disciplines that are workplace ready. Based on the findings of this scoping study, the Foreign Commonwealth and Development Office allocated funding to the TEA-LP.

NARRATIVE DESCRIPTION OF THE IMPACT

The TEA-LP delivers impact in the energy access sector, across three regions in the Global South, contributing towards the energy transition required by SDG7. The programme includes three work packages, which overlap to create an impactful network of resilience and change in energy education and access. The first of these supports curriculum enhancement of MSc programmes across 29 universities in Africa, Asia and the Indo-Pacific through the uptake of three adaptable courses:

- Local solutions for Energy Access
- Mini-grids: Planning and Design
- Appliances for Off-grid Communities

This approach has created locally-relevant, industry-appropriate MSc programmes that equip graduates to confidently enter the energy industry. Courses include modules on technology, policy, business models and the socio-economic aspects of energy access, and adopt a case study approach. Students graduate with skills and competencies that enable them to contribute to the sustainable delivery of clean energy in their countries.

Second, TEA-LP delivers four CPD courses, filling a need felt by energy companies and professionals for access to training:

- Future Female Leaders in Energy
- Integrated Energy Systems
- Integrated Data Energy Analytics
- Circular Economy and Sustainable Energy Transitions (launching September 2025)

The courses are designed with content experts from across the TEA-LP network and aim to bridge the knowledge gaps for working professionals in the energy sector.

Two FFL graduates who have catalysed their learning experience and shifted their careers within clean energy offer inspiring stories of professional growth. Mekides Ashagre is co-founder and CEO of Ablenee Energy Solutions, and Hannah Muthoni Gichuki left her role as a Solar Engineer soon after completing the FFL course to set up her own energy enterprise, Hannathon Ecodesign and Energy.

Students across both the TEA-LP supported MSc and the CPD programmes have consistently reported gaining confidence as innovators and leaders. They graduate feeling better able to translate ideas into tangible impacts - whether developing solar technologies, advancing energy solutions for homes and agriculture, or advocating for inclusive energy transitions. Building technical and entrepreneurial skills throughout the courses inspires a people-centered approach to energy access, shaping the next generation of change-makers who are driving a cleaner, fairer energy future.

In its third work package, TEA-LP focuses on building a Southern network of energy expertise that fosters partnerships, collaboration and community. Bringing together partners from diverse institutions, the programme creates spaces for sharing research, innovative practices and practical solutions to common challenges in sustainable energy education. These interactions extend beyond formal workshops, by strengthening professional and academic networks and building lasting collegial relationships. The network provides a platform to connect with peers, exchange insights and coordinate projects that advance energy education and research. Collaborations have also sprung up organically as a result of the TEA-LP network - for example, the collaborative lecture series in 2024 between universities in Nigeria and Malaysia, which was well attended by MSc students from both universities.

Through conferences, webinars and joint projects, participants gain access to expertise from other institutions, enabling them to adapt successful strategies to their own contexts, particularly in resource-limited settings. The programme also opens pathways for new opportunities that include international collaborations, research partnerships and roles in new initiatives - for example, the Faraday Battery Ambassador programme. These can provide professional growth for individuals as well as avenues for national technology advancement.



The network operates on various platforms to grow the reach and significance of its work. Partner university faculty members receive monthly updates and quarterly newsletters, which share project news, current opportunities and the details of energy-related events and conferences. There is also an active [TEA-LP LinkedIn](#) page where project updates are shared with a wider audience (more than 4000 followers).

It further manages a [TEA-LP Rolling Fund](#) for partners to apply to gain industry exposure. This opportunity offers up to £2000 for activities related to energy education. Selection is currently underway with staff exchanges between universities and various workshops taking place. Misbahu Ladan Mohammed (Usmanu Danfodiyo University Sokoto (UDUS), Nigeria) and colleagues' had a [paper accepted for SEED 2024](#) that outlined the impact of the TEA-LP partnership on the UDUS Msc Renewable Energy programme as well as the methodologies used to adapt the TEA-LP courses and deliver the content. TEA-LP is able to leverage the wider TEA platform and through its connections link with organisations such as the [Faraday Institution](#) and [Efficiency for Access](#).

Overall, TEA-LP not only enhances individual capabilities but also strengthens institutional capacity and fosters a global community and network that is committed to sustainable energy solutions.

TESTIMONIALS

TEA-LP supported MSc courses:

Nelius Maina graduated from Moi University with an MSc in Sustainable Energy and Energy Access and now works as a Technical Customer Executive at Nexus Green Ltd in Uganda, a company that specialises in solar power systems in East Africa. Moi University is a member institution of TEA-LP. Her full story is available as a feature article on the TEA-LP website: [here](#). She commented on the course:

Throughout the course, I gained in-depth knowledge of renewable energy technologies including solar energy, wind power, small hydro, bioenergy, and waste-to-energy systems...The knowledge, resources, and mentorship I gained from the course continue to guide and inspire me as I work toward making a meaningful impact in the energy sector.

Nelius Maina, Moi University MSc graduate

Desire C Mussa recently completed an MSc in Sustainable Energy at the Malawi University of Business and Applied Sciences. TEA-LP supported him and 20 other students to attend the Africa International Conference on Clean Energy and Energy Storage in Nigeria. He presented research from his Masters and his paper was subsequently published ([available online here](#)). His full story is available on the TEA-LP website: [here](#). On his funded opportunity to attend AICCEES he commented:

Attending the AICCEES conference has taught me that young professionals in the energy sector have a significant role to play in increasing energy access across Africa. The AICCEES has shown me that I don't need to be older to contribute to sustainable energy access development. I have been motivated that I can make a difference even in my youth days.

Desire C Mussa, Malawi University of Business and Applied Sciences graduate

TEA-LP supported CPD courses:

I still refer to the draft I wrote during that session - it serves as a compass for the work I do today. I got so motivated that immediately after graduation from the course in February 2025 I quit my job from a solar company in Nairobi, Kenya and registered with Hannathon Ecodesign and Energy beginning of March 2025.

Hannah Muthoni Gichuki on the FFL Sunrise activity as part of the FFL course

The course was a turning point... It gave me the tools, the network, and the confidence to show up in rooms where decisions are made.

Melides Ashagre on the FFL course

TEA-LP network:

The TEA-LP partner university participants stayed together during the workshop. We shared our own ideas, research and issues. Then we also learnt from each other as to how the respective universities are innovating and addressing the challenges. Since the TEA-LP participants stayed together, there were exchange of views and ideas outside of the formal setting and this in fact strengthens the network and builds comradeship.

Ramendra Prasad, UniFiji, Fiji

TEA-LP network:

[B]eing part of TEA-LP has given us access to the incredible TEA-LP network, which we are already exploiting. One of these is the partnership with The Faraday Institution, which opened the opportunity for this Battery Ambassador position. My participation in the 2024 TEA Forum in Kigali created the opportunity for an ongoing partnership with Swansea University and the TEA@SUNRISE Network, for a joint project already submitted for the Ayrton Challenge. We are looking out for many other such opportunities.

Professor Emeka Oguzie, Federal University of Technology Owerri (FUTO), Nigeria

Attending the SEED conference as a TEA-LP partner was highly beneficial for networking with other TEA-LP partners. It provided an excellent opportunity to connect with colleagues, share experiences, and exchange valuable insights on sustainable energy education. The interactions during the conference facilitated the formation of new collaborations and strengthened existing partnerships, ultimately enhancing our collective efforts towards advancing sustainable energy education.

Nofri Yenita Dahlan, UiTM, Malaysia

One particularly promising avenue emerged during discussions with representatives from Lahore University in Pakistan. They expressed a willingness to host a webinar showcasing their experiences with their innovative rural energy education program, specifically tailored to the needs of rural universities. This is a fantastic opportunity for us, as a fellow rural university with limited resources for teaching and staff development. We're eager to learn from their successful strategies and explore potential adaptation for our own context.

Bright Chisadza, Lupane State University, Zimbabwe



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KEY ACHIEVEMENTS TO
DATE AS OF JULY 2025

The Transforming Energy Access – Learning Partnership (TEA-LP) is a network of university academics and energy sector professionals committed to ensuring a highly qualified professional workforce to drive SDG7: Sustainable energy for all.



ENHANCING UNIVERSITY DELIVERY OF MASTERS' CURRICULA FOR SDG7

This work stream aims to enhance university delivery of masters' curricula focused on clean energy access. The support includes funding, technical and marketing support, facilitating linkages and sharing of expertise between our partners, and facilitating guest lectures and trainings by energy companies.



29 partner universities supported across Africa, South Asia & Indo-Pacific



3 masters' courses developed for university uptake:

- Local solutions for Energy Access
- Mini-grids: Planning and Design
- Appliances for Off-grid Communities



2 training workshops delivered for 97 academics



875 masters' students enrolled



CAPACITY BUILDING FOR PROFESSIONALS



We support the growth of the sector through the development and delivery of market-informed Continued Professional Development (CPD) courses. These include focus on end-user relevance and applicability, and are designed with the modern employee in mind, accommodating those who work full-time, have family responsibility, and other time commitments. UCT provides an academic 'home' and the required certification of the CPD courses, which are accredited by the Engineering Council of South Africa (ECSA).



4 CPD courses developed in collaboration with African content experts:

- Future Female Leaders in Energy
- Integrated Energy Systems
- Integrated Data Energy Analytics
- Circular Economy and Sustainable Energy Transition * in development



403 FFL students
70 IES students
81 IDEA students
enrolled across 22 cohorts in 34 countries



First industry webinar:
Powering the Future:
The integration of AI and Smart Grids in the Internet of Energy

POTENTIAL FOR COLLABORATION

Are you interested in working with us or possibly funding aspects of our work to further drive SDG7 in Africa, South Asia and the Indo-Pacific? Please contact Jiska de Groot at jiska.degroot@uct.ac.za

NETWORK OF SOUTHERN ENERGY EXPERTISE

TEA-LP is in the process of building a strong network of professionals between the energy and off-grid energy sectors, higher education institutes, and research centres to facilitate the sharing of resources, expertise, and knowledge to support and grow the network and contribute to furthering the ecosystem of Southern expertise, in particular:

- Expanding the TEA-LP network of institutions
- Forging and strengthening beneficial collaborations between universities, researchers, and industry partners at a global level in the energy access sector
- Provide ongoing support to TEA-LP network partners
- Implement a strong communications and dissemination strategy
- Broaden the scope of partnership activities including developing research activities



4089 followers



21 newsletters



101 website posts



Attended/hosted 24 networking events



7 formal partnerships with industry specialists



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www.tea-lp.org

ADDITIONAL RESOURCES

The TEA-LP website contains a repository of case studies and features, detailing the experiences of participants on MSc and CPD programmes and after graduation. Quotes are published from interviews with partner university faculty, students and course participants.

TEA-LP network members have also participated in several conferences and events over the past two years, growing the programme's exposure.

Conferences and events

2025:

- 8th ASEAN Smart Grid Congress, Malaysia - [three partners supported to attend event at UiTM](#).
- Energy Access Investment Forum EAIF 2025, Kampala, Uganda - [nine partners supported to attend](#).
- Youth Energy Summit (YES 2025!), Cape Town, South Africa - online write up [here](#) and [here](#).
- Enlit Africa - [Jiska de Groot represented the TEA-LP and spoke on the Project and Investment Network panel](#).

2024:

- Africa International Conference on Clean Energy and Energy Storage (AICCEES) - supported [attendance of 21 students](#) (12 in-person, 9 virtually).
- Enlit Africa 2024, Cape Town, South Africa - [sent two Future Female Leaders in Energy to the event](#).
- Sustainable Energy Education Conference (SEED 2024), Valencia, Spain - supported [attendance of 11 partners](#).
- Energy Access Investment Forum EAIF 2024, Lagos, Nigeria - supported [attendance of 10 partners](#).



ACDI IMPACT STORY

DOCUMENTING CHANGE THAT LASTS

The TEA-LP core team members are based at the University of Cape Town and Loughborough University. Together, they bring a wealth of experience in both the energy and higher education sectors to the programme. The core team consists of Leslie Ashburner, Mascha Moorlach, Andrea Campbell, Kai Forster and Jiska De Groot.

The TEA-LP is one of eight projects funded with UK aid from the UK government under the TEA programme. For more information on the TEA and the other projects being supported, visit [Carbon Trust TEA website](#).



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