



Access to Energy

Training & Entrepreneurship

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Life Is On

Schneider
Electric

Content



1 Addressing two fundamental rights
Page 5



2 Short certificate training
Page 10-11



5 Entrepreneurship support
Page 16-17



3 Long term training
Page 12-13



4 Training of trainers
Page 14-15



Addressing two fundamental human rights: access to energy and education

Access to energy has now become central in world political commitments...

The 7th goal set by the United Nations (UN) member states at the Sustainable Development Summit is to “**ensure access to affordable, reliable, sustainable and modern energy services for all**” by 2030. All development organizations today agree on the existence of interactions between climate factors, energy and poverty.

...because access to modern energy is a powerful lever for economic development.

Access to energy is a major human challenge that goes beyond technological issues alone. The least privileged people of the world’s population live on less than two dollars per day, while energy expenditure can exceed 15 dollars per month for a family.

Access to modern, sustainable energy is a prerequisite to improving health and living conditions for local communities. It is also an instrumental factor in economic development, conducive to:

- Access to education
- Enhanced productivity for entrepreneurs and farmers
- Improved health and living conditions
- Promotion of low-carbon energy

1.06 billion
people do not have access
to electricity²

In most sub-Saharan countries, **the rate of enrolment in formal secondary TVET* does not exceed 5%¹.**

Access to education helps reduce inequality and opens the way to more sustainable lifestyles

The 4th goal set at the UN Sustainable Development summit is to “**ensure inclusive and quality education for all and promote lifelong learning**”, by 2030.

Technical and vocational training enable economically and socially underprivileged adults to escape poverty by providing them with the skills required to access employment and entrepreneurship.

However Technical and Vocational Training and Education (TVET) is often neglected in the education systems of developing countries: only a very small minority of people benefit of it. Finally, TVET in energy-related fields is essential to the promotion of energy access, through the skills brought locally to develop electrification solutions and through the creation of jobs in this sector.

*TVET: Technical and Vocational Training and Education

¹ Agence Française de Développement, http://www.afd.fr/home/projets_afd/education/la-formation

² Global Tracking Framework 2017

Our Access to Energy Program, furthering local and individual development

Access to energy is a complex and multidimensional issue. It concerns both technical considerations and the need of developing and promoting socio-economic ecosystems adapted to each particular local context.

Schneider Electric's commitment is reflected in its Access to Energy Program with a three-point approach:

- Development and sale of products addressing the needs of local populations
- Investment, through two investment funds, in startups providing access to energy
- Technical and vocational training, and support for entrepreneurship for people from underprivileged communities

Access to Energy Training & Entrepreneurship pillar

Support from the Schneider Electric Access to Energy program opens access to qualified employment or entrepreneurship for people from underprivileged backgrounds, thereby opening brighter personal development prospects and helping to improve access to modern, reliable energy in their communities.



The Schneider Electric Foundation focuses on training people from underprivileged backgrounds. In addition to helping people, young people in particular, get off to a good start in their lives, training in energy and entrepreneurship also brings the wider community some of the skills needed for successful economic development.

Through the Schneider Foundation support, more than 130,000 people have so far benefited from vocational training in energy-related fields. This figure is expected to top the million mark by 2025. In this endeavour we are backed by many non-profit organizations and enjoy steadfast support across the whole of the Schneider Electric workforce.



Gilles Vermot-Desroches,
Sustainability Senior
Vice President
and General Delegate
Schneider Electric
Foundation



Since 2009, we have trained 130,000 people and supported more than 1,000 entrepreneurs in the energy sector with the aim of helping local communities acquire the key skills they need to sustainably develop access to energy. Right now, the program's main challenge is to scale up the impact of our initiatives.

Our partners are indispensable allies in this process; we implement a policy based on long-term partnerships with local and global players that are capable of replicating our initiatives. We also rely on our employees, working at our local subsidiaries or in volunteer missions, to lead our projects and roll out our initiatives. In the coming years, their work will be guided by three key focuses: entrepreneurship, support for women and training of trainers.



François Milioni
Director, Access to Energy
Training & Entrepreneurship,
Schneider Electric:



Key figures Impact

- More than 130,000 people from underprivileged backgrounds trained in energy-related fields
- More than 5,500 trainers trained
- 1,000 entrepreneurs supported who have launched their project

Ambition

1 million

people impacted by vocational training courses

10,000

trainers trained

10,000

entrepreneurs supported following the launch of their project

Strong partnerships and a committed workforce

Since the first courses were run in 2009, the program's achievements are the result of a long-term cooperation with our partner organizations in the field, through knowledge and co-financing partnerships. Their thorough grasp of local needs makes a close fit with our technical expertise.

Schneider Electric subsidiaries carry out our projects locally and provide significant support through the co-financing of material and financial contributions, to top up the Schneider Electric Foundation investment. We can count on our employees who diffuse their expertise and know-how to contribute to course design, provide valuable input for trainers, and give classes, through various schemes:

- Schneider Electric Teachers: non-profit organization set up in 2012 to enable current and retired Schneider Electric employees to take part in volunteer missions with partner NGOs.
- NGO Pass: scheme on renewable 12-months volunteer assignments in France or elsewhere.



Training at the heart of Schneider Electric's DNA

Since its creation, Schneider Electric has been committed to supporting education and technical and vocational training.

In 1929, Schneider Electric founded its own school – Paul-Louis Merlin – in Grenoble, to face the difficulty of recruiting skilled labour in the energy industry and help young people in precarious situation to access promising jobs. Today, the Paul-Louis Merlin Energy Industry School still focuses on vocational training in Schneider Electric areas of expertise, with innovative training approaches and close tie-in with actual industry practices. The students leave with qualifications enabling them to continue in higher education or take employment in innovation-rich energy-sector fields such as renewable energies, home automation and smart buildings as well as energy management.

Short-term training with certification

Owing to factors including high youth unemployment, early fallout from the educational system and insufficiencies in the provision of local vocational training, a high proportion of young people from underprivileged backgrounds face bleak prospects in emerging and developing countries.

Jobs in the electrical industry, instrumental in improving access to energy, offer greatly needed career openings and opportunities. In response to this challenge, Schneider Electric has developed full training programs in more than 30 countries, harnessing in-house and partners' expertise to provide quality training courses culminating in qualifications that address local employment markets.

Beneficiaries:

People from underprivileged backgrounds, school dropouts or people with no formal vocational education. Selection is by applicant motivation alone.

- **Duration:** 4 to 6 months

- **Content:** Program based on practical work with an emphasis on observation and hands-on learning. Our training content offer covers various fields among which residential electricity, industrial electricity and solar energy.

- **Equipment:** Schneider Electric has developed a range of training equipment for classroom and practical work, specially designed to offer a close match to local market needs (wiring, solar pumping stations, motor control systems, etc), as well as a modular library of content that can be tailored to local needs.

- **Qualification:** Students finishing the course leave with a course completion certificate.

- **Employment opportunities:** Following the training, students will have the basic skills needed to work in energy-related fields (as electricians, electrical maintenance technicians, etc.). Alternatively, they may opt to enter further education or apply for Schneider Electric support on setting up their own businesses. Our training programs allow trainees to enter the labour market for a long-term professional insertion.



Value added

The flexible course format matches the needs of the target audience: minimizing written course material to make it accessible to people with no formal vocational education, and the short course duration enables rapid access to revenue-generating employment or entrepreneurship.

More than 117,000 people from underprivileged backgrounds followed short courses since 2009

Success story

INDIA, A national network of training centres

Partners: 33 partners including DB Tech, the GAAR Varalakshmi Foundation, education non-profit Aide et Action, central and regional governments, the National Skill Development Corporation (NSDC) and the Power Sector Skill Council (PSSC).

Solutions: vast network of 260 centres dedicated to vocational training in electricity-related disciplines, with a focus on basic skills as well as solar equipment installation and maintenance. **Deployed in 29 Indian states**, they contribute to the development of a skilled workforce in the field of electricity, helping local communities to gain sustainable access to the job market while enhancing India's energy independence.

Results: more than 68,000 people impacted and over 600 entrepreneurs supported. In 2016, a new partnership was set up with India's Ministry of Education and several leading vocational training providers to create a centre for excellence as well as 100 additional training centres.



Long term courses integrated with existing diploma courses

The Access to Energy Training & Entrepreneurship Program also supports longer, more in-depth courses in energy-related fields. Integrated to existing diploma programs, these courses enable beneficiaries to find more stable higher-qualified employment or opt to continue with higher education.

These initiatives involve supporting and reinforcing local education systems under multi-player partnerships with local non-profit organizations and national educational authorities in France and the host countries.

Beneficiaries:

People from underprivileged backgrounds. No prior formal qualification is required, but applicants do need to have basic literacy and numeracy skills needed for assimilating the course content. For each applicant, Schneider Electric verifies motivation and time availability for attending the course.

- **Duration:** 1, 2 or 3 years
- **Content:** Theory and hands-on practical work. Our training content offer covers various fields among which residential electricity, industrial electricity and solar energy.
- **Equipment:** Schneider Electric has developed a range of training equipment for classroom and practical work, specially designed to offer a close match to local market needs (wiring, solar pumping stations, motor control systems, etc), as well as a modular library of content that can be tailored to local needs.
- **Qualification:** Students who pass their completion examinations earn a diploma as part of the training program of the centre they are enrolled in.
- **Employment opportunities:** Typical openings for course graduates include jobs in electrical system installation and maintenance, and in construction and manufacturing industries. Alternatively, students may opt to enter higher education in related technical or more general engineering fields. Our training programs help trainees to enter the labour market for a long-term professional insertion.



Value added

They reinforce the existing vocational training systems in the host countries and offer students the security of a diploma upon course completion.

More than 13,000 people from underprivileged backgrounds followed long-term courses since 2009

Success story

SOUTH AFRICA, Centre of Excellence F'SASEC

Three-way partnership: French Education Ministry (provision of an expert), Vaal University of Technology (provision of premises and the training - supervisory personnel), Schneider Electric (sharing industrial and commercial know-how, and co-financing the technical platform and equipment).

Solutions: the centre **trains technicians at the junior and advanced level, on topics relating to electricity, energy and automated system control.** The benefits of centres of excellence: strengthen education-industry relations, boost local workforce qualification, promote the company's know-how, stimulate rapid modernization of the host country's vocational training systems, and foster the professional insertion of youth.

Results: more than **350 students already trained.** In 2016, an agreement was signed to open four new training centres in South Africa, in the following universities: Cape Peninsula University of Technology, Sedibeng TVET College, University of Johannesburg and University of Cape Town. The ambition: open some 20 centres across southern Africa (in Mozambique, Angola, Malawi, etc.).



Training of trainers

The Schneider Electric Access to Energy Training & Entrepreneurship Program provides valuable support for the trainers involved in its projects.

The aim is to help trainers to acquire a thorough grasp of the training approach and materials, which enables them to efficiently convey full and relevant know-how to the students on the program's short and long courses.

Training of trainers ensures effective transmission of quality, up-to-date know-how finely tuned to the characteristics of today's energy markets in the host country.

Beneficiaries

Trainers at training centres and personnel of the Schneider Electric Foundation's partner NGOs and other technical trainers.



• **Duration:** Several weeks to several months

• **Content:** Trainers are supported to update their skills in line with current standards. They are trained in instructional methods and their level of technical knowledge is enhanced in all industry-related technologies and innovations. Schneider Electric co-finances the training equipment and training materials and helps to develop the courses that are given.

Training of trainers programs rely on the participation of locally based Schneider Electric employees and retirees as well as on initiatives such as Schneider Electric Teachers and Pass ONG, fostering experience-sharing between Schneider Electric experts and the training staff.



Value added

This objective is to develop know-how acquisition and ensure long-term operation of training programs by furthering the self-reliance of partner organizations and local education systems. We actively work to develop training of trainers, by opening more and more centres specifically dedicated to this type of training.

Success story

LEBANON, **Seeds of Hope** program

Partners: European Institute for Cooperation and Development (IECD), and the **Lebanese Ministry of Education**

Solutions: project launched in 2007 to help rebuild Lebanon after the 2006 war, by initiating and supporting vocational training reform in the field of electrotechnology. **Training of trainers is a key element of the program:** co-financing of modern electrical equipment for training purposes and Schneider Electric employees invest time and effort in updating the training curriculum and upgrading trainers' skills (new technological and training methods).

Results: **vocational high school diploma in electrotechnology**, accredited by the Lebanese Ministry of Education and Higher Education in 2010, **accessible in 17 partner public and private schools**. Today, more than **90 trainers and 1,300 young people trained in Lebanon** and the program is replicated in Egypt, Nigeria and Morocco.



More than 5,500 trainers trained since 2009



Entrepreneurship support

Encouraged by the achievements of its training courses, the Access to Energy Training & Entrepreneurship Program is taking a step further by providing the electrical technicians completing the courses with support in setting up their own businesses. Employment markets in emerging economies feature high proportions of small-scale informal businesses, businesses operating under the full livelihood threshold, and people with multiple jobs providing multiple income sources. In addition to specific skills training, entrepreneurs also need business startup support, both being key factors for the creation of long-lasting businesses.

Beneficiaries

People who have completed Schneider Electric training courses, electricians of the informal sector and social entrepreneurs.

- **Duration:** 2 to 7 days of initial training, several months of support by our partners
- **Content:** In addition to enhancing technical expertise in electricity-related disciplines, programs are designed to provide entrepreneurs with the managerial tools and skills they need to manage their businesses and become part of the formal economy, in a bid to secure sustainability. They also support entrepreneurs on their journey, to help bring their ideas to market, through a process of mentoring and knowledge sharing.
- **Equipment:** Schneider Electric has developed a range of training equipment for classroom and practical work, specially designed to offer a close match to local market needs – wiring, solar pumping stations, motor control systems, etc. – as well as a modular library whose content can be personalised.
- **Employment opportunities:** We help participants to network with their peers and other players to create a positive local ecosystem. We act as a facilitator to give entrepreneurs access to the financing they need to get their businesses underway. We structure the skills of informal entrepreneurs in energy to ensure the security of installations and the development of their activity.



Value added

Help people create their business while contributing to the effort towards access to energy for all, contribute to the local economic and social development, foster the professional insertion of youth and the inclusion of women in energy professions.

Success story

BRAZIL,
Supporting equal opportunity for women in Brazil

Partners: SENAI and the Ser do Sertao cooperative

Solutions: 160 hours of training in basic electrics and the operation of photovoltaic systems, plus 40 hours of training in business startup procedures and techniques (sales, services and communications kits). Program offering equal business opportunities with a double objective: economic empowerment and promotion of gender equality.

Results: first promotion with 17 men and 18 women from 14 Brazilian regions. Brazil is replicating this initiative which fosters women's entrepreneurship in other partner centres. Since 2009: more than 30,000 people trained in Brazil.

1,000
entrepreneurs
trained since
2009



List of partners

Algeria - CEAFE + MFEP

Burkina Faso – Lycée Professionnel Régional du Centre + Ville de Grenoble + Grenoble Goughin + Woor Den Daad + Christian Relief and Development Organization

Burundi – Association pour la Promotion de l'Enseignement et de la Formation à l'Etranger + Action Development Education International

Brazil – Unilins + Center for Human Development + Dom Bosco Institute + Centro Juvenil Salesianos Dom Bosco + Centro Social Paróquia Santa Luzia + SENAI Alagoas + SENAI Maranhão + SENAI Paraíba + SENAI Pernambuco + SENAI Tocantins + SENAI Amazonas

Cambodia - Centre Kram Ngoy + Don Bosco + Phnow Penh Institute of Technology + National Technical Training Institute + Kassamak + Pour un Sourire d'Enfants

Cameroon – Cefom + Centre Africain de Formation et de Recherche Administratives pour le Développement + Université Catholique d'Afrique Centrale/Institut Catholique d'Arts et Métiers + Institut Panafricain pour le Développement + Foyer Bepanda/Centre de Formation de la Profession Comptable

Chad – Institut Panafricain pour le Développement + Office National pour la Promotion de l'Emploi

China – Chongqing Wanzhou Vocational Education Center + Xi'an Gongcheng Jishixueyuan + Shaanxi Institute of Mechatronic Technology + Ning'er Hanizu Yizu Zizhixian Zhiyegaojizhongxue + Shandong Bailie School of Gansu Province + BN Vocational School + Wuhan Instrument and Electronic Technical School + Guangzhou Information Engineering Vocational School + Pujiang Secondary Technical School + Guizhousheng Shuili Dianli Xuexiao + Yantai Engineering & Technology College + Fujiansheng Jianjing Zhiye Zhongzhuan Xuexiao + Tute Fushu Gaojuzhuan Xuexiao + Beijing Electrical Engineering School + Hebeisheng Keji Gongcheng Xuexiao + Ningxia Industrial School + Ningxia Vocational Technical College of Industry and Commerce

Colombia – Servicio Nacional de Aprendizaje + Instituto Técnico

Central + Centro Don Bosco + Ciudad Don Bosco

Congo - Institut Catholique d'Arts et Métiers + Don Bosco

Democratic Republic of the Congo - ACTEC + Don Bosco

Costa Rica - Don Bosco

Ecuador – Ministerio de Educación de Ecuador + Flemish Association for Development Cooperation and Technical Assistance

Egypt - Institut Européen de Coopération et de Développement + Don Bosco + International Training Center

Ethiopia - Helvetas

Gabon - Institut Panafricain pour le Développement + Agence Nationale de Formation et de Perfectionnement Professionnels

Ghana - Don Bosco + Village Exchange Ghana

Guinea-Bissau – Humana For People + Ajuda de Desenvolvimento do Povo para Povo

India – Aide et Action + Don Bosco Tech Society + Ambuja Cement Foundation + Art of Living Foundation + GMR Varalakshmi Foundation + IL&FS Skills + Sambav Foundation + SNS Foundation + SOMA Foundation + SRF Foundation + JSL Foundation + Swami Vivekananda Rural Community College + Ici Academy for Skills + Dharampal Satyapal Charitable Trust + MANTHAN Grameen Service + SEEDS + Lok Bharati + Sriram New Horizon + Functional Vocational Training Society + AISECTS + Kalinga Institute of Social Science + Tech Mahendra Foundation + TATA Strive Community Initiative Trust + Centuiran University + SRTRI + NSHM Udaan Foundation + JSL Life + OXAM India + NSIC + Nav Bharath Venture + Indo German Institute for Advanced Studies + Don Bosco Valigatti + Global Success Foundation + Sishu Mandir + SLIEM + Aditya Birla Foundation + Gram Tarang Employability

Indonesia – Anugrah Anak Sumba + Waingapu + East Nusa Tenggara + Surya Institute

Ivory Coast – CPMbat + Institut Européen de Coopération et de Développement

Kazakhstan – KazNTU + KarGTU

Kenya - Don Bosco

Lebanon - Institut Européen de Coopération et de Développement

Mali – IUT Segou + IUT Angoulême + DAMA + BorneFonden

Morocco - Institut Européen de Coopération et de Développement

Mexico - United Way

Myanmar – ACTED + Myanmar Engineering Society + Union of Myanmar Federation of Chambers of Commerce and Industry + Government Technical High School + Yangon Technical University + Thanlyin Technical University

Nigeria - Institut Européen de Coopération et de Développement + King's Polytechnic

Pakistan - Muslim Hands + Technical Education & Vocational Training Authority + Punjab Vocational Training Council

Palestine - Don Bosco

Panama – Ministerio de Educación

Philippines - Don Bosco Technical College

Senegal – Village Pilote + Les Mains Ouvertes

South Africa – Vaal University of Technology + University of Johannesburg + Sedibeng Technical Vocational Educational Training College + College of Cape Town for Technical Vocational Educational Training + Cape Peninsula University of Technology + Ministère français de l'Éducation Nationale, de l'Enseignement Supérieur et de la Recherche

Sri Lanka - Don Bosco

Tanzania - Action Development Education International + Centre International de Formation Technique KIITEC + Lutheran Vocational Center + INCOMET

Togo - Energy Generation

Turkey – EGE University

Vietnam – Énergies Sans Frontières + Institut Européen de Coopération et de Développement + Asia Society for Social Improvement and Sustainable Transformation

More than 150 projects supported in 40 countries



Our network of more than 150 partners in 40 countries includes NGOs along with local authorities and institutions. As well as seeking to replicate successful existing projects, we also want to launch new projects capable of amplifying our impact.

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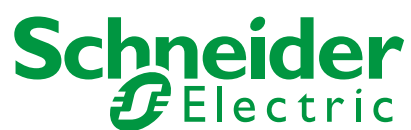
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