

IEEE Smart Village at the PES/IAS Power Africa 2018 Conference

IEEE Smart Village's (ISV) co-locates a series of workshops, presentations and round-table discussions each year at IEEE's annual [Power Africa Conference](#) (PAC). Two of IEEE larger societies, Power and Energy (35,000+ members) and the Industrial Applications (14,000+ members) have joined forces to coordinate the latest international forum on clean and affordable energy pathways in support of the United Nation's sustainable development goals (SDGs). The 2018 IEEE Power Africa Conference (PAC) will be hosted by Tshwane University of Technology (www.tut.ac.za) in Century City, Cape Town, South Africa, from June 26-29. The conference will emphasize affordable and clean energy solutions pursued and deployed in African settings.

ISV's participation in PAC plays a central role in the success of ISV by continuing the development of the growing network of ISV energy entrepreneurs. ISV delegates are afforded the opportunity to not only take advantage of the prestigious PAC conference itself (which is of great interest to our ISV members) but also to leverage that meeting with a much more expansive series of tutorials, discussion groups and hands-on experiences. ISV involvement also plays a critical role in the vetting of future partners.



Roger Banla of Ignite Africa, Cameroon, introduces their educational program at Power Africa 2017, Accra, Ghana



Paras Loomba Global Himalayan Expedition, India, instructs how to assemble LED light bulbs at his hands-on workshop Power Africa 2017, Accra, Ghana

ISV delegates include leaders (like those pictured above) from its current supported programs along with a selection of future energy entrepreneurs who are in the process of developing their funding request. To assure the widest possible involvement, ISV provides modest travel support to those in need and of merit by application.

The ISV sessions are built around the three primary components of the Smart Village program – Energy (electrifying the energy impoverished), Education (operator and community), and Empowerment (stimulating entrepreneurship).



ISV delegates at Power Africa 2017 Ghana "Technical Tour" to the Pediatorkope Island solar power installation. About half of the group are current Energy Entrepreneurs with ISV-funded programs. The balance include program leadership, key IEEE member volunteers and a cross-section of aspiring program leaders in the pre-launch pipeline.

Program planning for the 2018 sessions are underway building on the success of our 2016 and 2017 PAC participation. Here is how this year's program is shaping up (subject to change).

GENERAL

Introduction to IEEE Smart Village

30-min

Presenter: Mr. Ray Larsen and/or Mr. Robin Podmore - Co-Founders of ISV

This presentation will serve as both an introduction to ISV for attendees to the overall Power Africa conference, as well as, a reminder to our current community entrepreneurs of the three ISV pillars – Energy, Education and Entrepreneurship. The presentation will outline how the three pillars inter-relate and support each other, and without a strong co-existence of which a long-term self-sustaining project success can be highly problematic.

Introduction to Newest Community Entrepreneur programs

20-min each x 3

Presenters: Maasai Trust (MAA), Kenya; Sava Bharati (SBI), India; Nam Can Tho University (NCTU), Vietnam

Representatives from ISV's newest programs (just funded or funding pending) will provide a 20-minute presentation each, on the following: organization's background, the challenge or need it

plans to address, and how the new ISV partnership provides the right impetus for successfully addressing the need. The project introductions are catalysts to further discourse.

Updates from Current Community Entrepreneur programs

20-min each x 9

Presenters: Igniting Africa (IA), Cameroon; Renewable Energy Innovators (REIc), Cameroon; Shakti Empowerment Solutions (SES), India; Solar Soul Collective (SSC), India; Green Village Electric (GVE), Nigeria; Shaybis Nigeria Ltd (SNL) Nigeria; Madan Community Smart Village (CTC), Papua New Guinea; Africa Development Promise, Uganda.

Representatives from current ISV programs with their projects underway will provide a 20-minute presentation to share their organizations' backgrounds, program progress, lessons learned, challenges encountered, achievements, opportunities and goals. The project updates serve as catalysts to further discourse.

Introduction to New ISV Operations Committee (OpsCom) & Reporting

30-min

Presenter: Dr. Alan Mickelson, OpsCom Chair, Associate Professor, Electrical, Computer and Energy Engineering University of Colorado at Boulder

The purpose of this session is to ensure that program partners understand the new ISV reporting guidelines. During this half hour session Dr. Mickelson will introduce and walk participants through the new reporting template and stress the importance of timely and complete report submission in accordance with the grant agreement and deadlines. The session ends with a Q&A where partners can ask their questions or share some of their experiences.

Importance of Public Relations and Marketing – Keys to your program's success

50-min

Presenter: Mr. Dan Estes, Marketing Committee Chair, Executive Director – Engineering Operations Cox Business, Atlanta, Georgia.

Image and reputation are enablers when raising funds and cultivating donors. The future of humanitarian programs like ISV is directly related to the good public relations, wide promotion, high reputation and broad public awareness of the great successes of the program. This session will discuss how to solicit and document stories of community transformation and program accomplishments, and the way social media campaigns work to drive program support and philanthropic contributions. Photographs, videos, stories of how life has changed for individuals and community are critical to not only ISV's ability to raise funds for the program, but also, for the ISV seed-funded Community Entrepreneurs themselves to raise the expansion capital well beyond ISV's kick-start support.

Mobilizing Resources for Cooperative Development

40-min

Presenters: Ms. Monica LaBiche Brown, Ms. Sherina Munyana and Mr. Tonny Muteesasira, ADP

Cooperatives are businesses that are owned, governed and democratically controlled by its members and are powerful tools to build power, wealth, and develop member-leaders. Africa Development Promise's (ADP) approach to cooperative development is based on the belief that local ownership, broad participation and leveraging local knowledge and resources empowers communities to sustainably address their most pressing economic and social needs. In this session, ADP staff will discuss their process of mobilizing groups and resources, building institutional capacity of these cooperative businesses and enhancing the scale and visibility.

ENERGY

20 by 20: A Design Charrette to Achieve \$0.20/kWh

50-min

Presenter: Mr. Ifeanyi B. Orajaka, Managing Director, GVE Projects Ltd., River State, Nigeria

20 by 20: A Design Charrette to Achieve \$0.20/kWh was a conference hosted by Rocky Mountain Institute in conjunction with Nigeria Rural Electrification Agency in Lagos, Nigeria on March 6 – 9, 2018. It brought together the world's foremost experts on the African mini-grid market to understand what needs to happen to achieve a mini-grid levelized cost of energy (LCOE) of \$0.20/kWh by 2020. ISV Partner, Mr. Ifeanyi Orajaka, attended the conference and will share his learnings around the following:

(1) How can we reduce costs and improve market growth so that mini-grids can reach a profitable and scalable business model in the next 3–5 years? (2) What size and type of funding is required to accelerate progress, and (3) What program design is needed to apply the funds most effectively, while preserving competition and innovation, and driving towards cost reduction and other business model improvements? (5) What are the next steps, and who are the partners for immediate action?

AC & DC Micro-Grids – Comparative Applications in the Smart Village World

50-min

Presented by Jude Numfor, Reliable Energy Innovators – Cameroon; Ernest Bah Ngeh and Etienne Kanjo, Ignite Africa - Cameroon

A comparative look at the advantages and appropriate applications of AC and DC micro grids in the Smart Village space.

Data Acquisition and Telemetry Systems

2-hours

Presenter: Mr. Alain Riaud, Electriciens Sans Frontières, France

This workshop will be a combination of a presentation and hands-on activity. Partners will get an update on most recent iteration of ISV's PBK (Portable Battery Kit) and the new web-based PAYGO business options for rural energy distribution operations. This real time monitoring system will allow partners to track customers to understand how they use their system and manage recurring payments, using cash and/or mobile money. This workshop will also include a demonstration and hands-on exploration to really see what the system can do.

EDUCATION

Engineering-Education-Enterprise: Coherent Opportunity

4-hours

Presenters: Ms. Vo Pham Trinh Thu, Vice Director of the Can Tho University Foreign Language Center, Vietnam and Dr. Dan Wessner, Secretary of the IEEE Smart Village Steering Committee and a Professor of International Development at Future Generations University.

This one-half-day workshop facilitates a constructive and clear approach to the three component parts of the IEEE Smart Village opportunity for just and lasting change. These three attributes of sustainable and scalable development are linked with purpose. They can guide a process of empowerment through the leadership of community entrepreneurs who harness well-engineered tools (solar or wind power, connectivity, or global classrooms), holistic and integrated learning (educational tools and approaches that serve large audiences), and social enterprise (middle-out actors with business smarts, community-to-national relations, and a vision for transformative change).

Developing Community Education Programs

40-min

Presenter: Ranjan K. Sen, PhD, President, Seva-Bharati, India

Developing community-based education programs varies from one community to another, based on community needs. A striking feature of Seva Bharathi community development model is its localized approach. The organization has a strong focus on rural communities and slum areas where it manages formal and non-formal schools, and after school education programs. In addition, Seva-Bharati partners with Greenfield Industrial Training Institute (GITI) and India Institute of Technology (IIT) to train community members on solar electricity that includes installation, deployment and maintenance. Through the Seva-Bharati Krishi Vigyan Kendra (KVK) the organization provides education and training in agriculture, water resource development and related technologies. In this session, Dr. Ranjan Sen will provide a brief background on the organization, share the successes and challenges of developing a sustainable community-based education and the approach used by the organization to assess and address community education needs.

Using a Systematic Approach for Vocational Training

1-hour

Presenter: Robin Podmore, Co-Founder of ISV

The presentation will cover the ADDIE process.

Analysis: Performing a task analysis for the job

Design: Defining the learning objectives and critical steps

Development: Converting classroom and field instruction to a Digital Tool Box.

Implementation: Delivering content to students using a Digital Tool Box.

Evaluation: Updating content as conditions change.

The proposal is to select and support a few IEEE Smart Village Scholars on all phases of the ADDIE process. They will be trained in how to capture and document the knowledge and skills of existing subject matter experts. This can be through job shadowing, interviews or recording a trainer at work in the classroom or in the field.

ENTREPRISE

Action for Growth

2-hours

Presenter: Irene Samy Fahim, Ph.D., Assistant Professor of ISEM Academic Program, Nile University, Egypt

The goal of this two-hour session is to help partners/entrepreneurs better understand themselves and their business. Drawing on Goldman Sachs *10,000 Women Entrepreneurship and Leadership (WEL) Program*, Dr. Irene Samy Fahim will walk partners through a template for growth to addresses the following: opportunity identification, market feasibility, vision and organizational culture, money and metrics, forecasts and being bankable, operations and processes.

Dr. Fahim will be available during the Conference week to provide support and feedback to partners who choose to work on their growth template during that period of time. (Conference delegates who wish to have their business plans reviewed will need to provide their growth template in advance of the Conference.)

Building a Go-To-Market Strategy for your Social Enterprise

2-hours

Ms. Tara McCartney, Director, Shakti Empowerment Solutions (SES), India

A thorough Go-to-Market strategy is essential for any new enterprise and works with the high reaching question of what I am selling to whom and through what channels in what market conditions. Tara spent 10 years in the corporate sector developing GTM plans for new products and services, and in this practical session will take you through the various elements of a GTM strategy for a budding or early stage social enterprise, how to transfer those elements to an operational project plan and will also address special case issues for social enterprises with the aim to open your view to a 360 perspective.

ISV Partners will work in small groups to develop a GTM for their respective enterprises, with guidance, and will present to the larger group for feedback.

Sustainable Fund Development

30-min each

Presenters (Invited but not confirmed): Africa Development Bank (ADB), World Bank, United States Agency for International Development (USAID)

Representatives for the invited funding institutions will provide ISV partners with a presentation on each institution's funding priorities, specific program areas/sectors of interest, types of funding instruments it offers, a profile of a strong grantee/awardee, its selection criteria and partnership development. Each presentation will end with a Q&A session.

PENDING

Programs by Others

30-min each

The ISV@PA18 program session committee is reaching out to a few local service providers in South Africa who have projects and programs similar to those of ISV. Some are commercial, while others are NGOs and non-profits like ISV. Our hope is to engage one or more of the local organizations to share information about their work, accomplishments, challenges, and other items of interest. The goal is to learn from others who are likewise pioneering the ISV-supported type of work.