KNOWLEDGE PARTNERSHIP PROGRAMME

Knowledge Partnership Programme

Best Practices in Decentralised Renewable Energy Access: A Knowledge Transfer Initiative from India to Africa and other ASEAN Regions

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Consolidated Report

BEST PRACTICES IN DECENTRALISED RENEWABLE ENERGY ACCESS: A KNOWLEDGE TRANSFER INITIATIVE FROM INDIA TO AFRICA AND OTHER ASIAN REGIONS

January 2015

The initiative supported by:

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Executive summary

The **key objective** of the proposed project was to 'share the existing knowledge and best practices from India with other regions in Africa and Asia, primarily targeting incubation centres and renewable/industry associations to achieve wide coverage and support renewable energy entrepreneurs and business development' through sustainable models and initiatives.

The initiative was primarily **targeted towards**:

- **Incubation centres** – organizations supporting or planning to support the development of renewable energy enterprises in their respective geographies.
- **Renewable energy industry associations and networks** – associations and networks of renewable energy enterprises, practitioners, industry representatives, and support organizations.
- **Energy entrepreneurs** – from Africa, India and other nations in South East Asia.

The project was initiated by the International Renewable Energy Agency (IRENA) with funds for the India knowledge transfer from the Department for International Development (DFID) – Govt. of UK, through its Knowledge Partnership Programme (KPP). It was implemented by the Centre for Innovation Incubation and Entrepreneurship (CIIE), IIM Ahmedabad; and additional partnerships with SELCO Incubation Centre, Asian Development Bank (ADB) and The Climate Group for each of the three events.

The 7-month-long project was implemented in a phased approach. In the first phase, key stakeholders involved in the energy enterprise development ecosystem were identified from Africa, India and countries in South East Asia. These included representatives from all three stakeholders mentioned above. These individuals were then invited to a day-long knowledge sharing workshop on "Best Practices in Decentralised Renewable Energy Access: Sharing Knowledge for Renewable Energy Enterprise Development" that was organized prior to the International Off-Grid Renewable Energy Conference (IOREC) on 15 June 2014 in Manila, Philippines. The workshop was organized by CIIE, with support from IRENA and ADB.

Based on outcomes from this workshop, the second phase was designed to involve a week-long workshop titled "Building energy businesses: knowledge sharing sessions with business incubators and entrepreneurs from Asia & Africa." This workshop was focused only towards incubation centres and entrepreneurs from Africa and South Asia, and was co-organized by CIIE with SELCO Incubation Centre in Bangalore, India, from 22 to 27 September 2014. The organizers worked together to design a week-long training/knowledge sharing programme that involved talks, panel discussions and site visits. In all, 30 participants from 11 business incubators, 2 renewable energy associations and 10 energy enterprises from 8 countries within Africa and Asia (Kenya, Tanzania, Uganda, Egypt, Bangladesh, Myanmar, Nepal and India) took part in this workshop.

Considering its role in developing a regional network of renewable energy practitioners and stakeholders, it was decided that the project would provide limited support to a third workshop, which was organized by The Climate Group in Kathmandu, Nepal, on 10-11 November 2014. This workshop was titled "Knowledge Sharing amongst South Asian Regional Renewable Energy Associations and Networks and to initialise South Asia Network for Clean Energy (StANCE)." StANCE is expected to provide a regional platform for clean energy associations comprising members from business, civil society and academia to exchange information and consult on policies, technologies and financial mechanisms for the accelerated uptake of clean energy (renewable energy and energy efficiency) in South Asia.

The key **outcomes and next steps** from the project can be summarized as below:

- Actively supported the sharing and exchange of knowledge between various stakeholders involved in the energy enterprise development ecosystem in numerous countries from Africa and Asia, with a focus on incubation centres, renewable energy/ clean energy associations, and entrepreneurs.
- Best practices and knowledge from India were shared with representatives of these stakeholders through two workshops and one training programme, organized in Manila, Kathmandu and Bangalore. These events were attended by 14 renewable energy/clean energy associations from Asia, 3 renewable energy associations from East Africa, 11 business incubators, and 15 energy entrepreneurs. Workshops and training programmes also included donor agencies, NGO and Government representatives. The knowledge flow focused on India's experiences and reached out to 4 African countries (Burkina Faso, Kenya, Tanzania, Uganda); and 6 Asian countries (Bangladesh, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka). Major focus being South Asia and East Africa as lack of modern energy access is highest in these regions.
- Participants were exposed to multiple models of support that could be provided to energy enterprises, with sessions and talks that delved deep into challenges and aspects of each of these.
- Participants agreed to explore the creation of regional networks for sharing mentors, deal flow, best practices on skill development, investment and grant funding opportunities, opening up investor networks, and best practices in skill development, investment and funding opportunities.
- The business incubators are getting into "twinning" arrangements which will include knowledge sharing, process sharing, and additionally deal flows, at a later stage. Signing of MoUs between incubators, exchange visits are ongoing.
- A letter of intent towards sharing of knowledge and resources was signed between 13 organizations that were part of the project. This letter outlined activities that could facilitate further sharing of best practices, provided funding could be made available to the parties to facilitate the same.
- A LinkedIn platform has been initiated to share knowledge and information by members, currently a closed group.
- The parties in the letter will seek funding from relevant donors for carrying out these knowledge and resource sharing activities.
- The project also lent support to the creation of a regional network/alliance of renewable energy practitioners, associations and support organizations called South Asia Network for Clean Energy (StANCE). Knowledge from StANCE could be beneficial for the creation of similar alliances in Africa.
- East Africa industry associations proposed to form a formal group, with a link in to, possibly through the South Asia Alliance once set up. This is ongoing with RE Associations from Uganda, Kenya, Tanzania, Rwanda and Burundi establishing a Regional Renewable Energy Association called the East African Renewable Energy Association (EAREA).
- Provide inputs in creating customised training manuals as a reference that capture specific aspects of enterprise development and facilitation of virtual mentorship for entrepreneurs working in remote areas. These must be modular with examples and not complicated.
- Create a communication platform that can inform and foster cross-border partnerships among incubators and incubatees. IRENA's learning gateway – IRELP – could host webinars for the groups and the first one is taking place on the 9th of February 2015. Further webinars can be hosted by IRENA.

The partners

The project was jointly implemented by the International Renewable Energy Agency (IRENA) and the Center for Innovation, Incubation and Entrepreneurship (CIIE), and further supported by SELCO Incubation Centre, The Climate Group and the Asian Development Bank's Energy for All Programme. The initiative was funded by the Department for International Development (DFID) India through its Knowledge Partnership Programme (KPP).

International Renewable Energy Agency (IRENA)

IRENA is an intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy. IRENA recognises that achieving universal access to modern energy services is a vital pre-requisite to advancing socio-economic development. Decreasing cost and improving reliability have led decentralised renewable energy technologies to become cost-effective options for the provision of modern energy services in most rural areas. IRENA has embedded in its Work Programme 2014-15 numerous activities related to off-grid renewable energy including hybrid mini-grids, off-grid solutions for productive applications and working with business incubation centres and entrepreneurs to build the necessary capacity to develop sustainable business models. The entrepreneurship development programme is led by the Country and Support Partnerships (CSP) division of IRENA.

Knowledge Partnership Programme (KPP), Department for International Development (DFID)

KPP is a South-South cooperation programme promoting knowledge sharing in the areas of Food Security, Resource Scarcity and Climate Change; Health and Disease Control; Trade and Investment; and Women and Girls. KPP is funded by the UK Department for International Development (DFID) and managed by a Consortium led by IPE Global Private Limited under its Knowledge Initiative. The main objective of the programme is 'Gathering and uptake of evidence on issues central to India's national development that have potential for replication in LICs and impact on global poverty'. KPP supported the initiative to assist in the transfer of knowledge and experience from India to other regions.

Centre for Innovation Incubation and Entrepreneurship (CIIE)

The Centre for Innovation Incubation and Entrepreneurship (CIIE) at the Indian Institute of Management Ahmedabad is one of India's leading technology business incubators. Set up with an aim to promote

innovation and entrepreneurship in India, CIIE taps into the experience and expertise available at IIMA in the areas of management, innovation, technology networks and entrepreneurship.

- CIIE actively sources innovations from across the country through its “open innovation” programs and engages with industry experts to carry out evaluation of ideas as well as mentoring support.
- CIIE provides active mentoring, handholding, prototype development and financial support to innovators across technology sector.
- CIIE is actively involved in developing a strong support ecosystem for entrepreneurs in the cleantech and renewable energy sectors in India.

Over 100 new companies / projects have been supported by CIIE over the last few years, through various initiatives. Some of these include the Power of Ideas (India's largest start-up scouting competition), iAccelerator (India's first accelerator for IT, web and +971506411682 start-ups), Infuse Ventures (cleantech-focused VC fund) and MentorEdge (a nation-wide network of mentors and experts across sectors and functions).

In 2013, CIIE partnered with the Asian Development Bank to launch the second edition of a unique accelerator programme for early stage cleantech entrepreneurs - PowerStart. Over the course of two editions, this initiative has supported 23 cleantech ventures, many of which are in the energy access space.

SELCO
Incubation Centre

SELCO Incubation Centre

The SELCO Incubation Centre was set up In August 2012 through a partnership between the Small-Scale Sustainable Infrastructure Development Fund (S3IDF) and its strategic partner, SELCO Solar Pvt. Ltd. The Centre aims to nurture and empower the next generation of sustainable energy entrepreneurs to deliver energy solutions to low-income communities in India.

The SELCO Incubation Centre leverages S3IDF’s and SELCO’s shared resources, management expertise, intellectual capital, and combined 25 years of on-the-ground learning to expand access to vital energy services in India by:

- Replicating decentralized business models and processes
- Providing mentorship in social enterprise management and business planning support
- Assisting in developing the conditions necessary to support delivery of energy services
- Enabling access to seed and later stage capital
- Establishing a platform for networking, sharing best practices, and common sourcing

The program seeks to intervene at the critical start-up phase of the enterprise with business development services provided at later stages.

The Climate Group

THE CLIMATE GROUP

The Climate Group (TCG) is an award-winning, international non-profit. TCG aims to achieve a prosperous, low carbon future through a ‘clean

revolution': the rapid scale-up of low carbon energy and technology. TCG works with corporate and government partners to develop climate finance mechanisms, business models which promote innovation, and supportive policy frameworks. They convene leaders, share hard evidence of successful low carbon growth, and pilot practical solutions which can be replicated worldwide.

TCG has offices in Greater China, North America, India and Europe. In 2008, TCG began its India operations, working closely with Indian businesses and governments, to encourage leadership on climate change and to help unlock a clean industrial revolution. Through networking with the business community, policy makers, media and civil society, TCG is showing how low carbon economic policies can support India's continued economic growth and development, providing a prosperous future for all.

TCG's Access to Rural Energy in India programme, Bijli – Clean Energy for All, which is principally funded by the Dutch Postcode Lottery, aims to reduce greenhouse gas emissions and enhance the lives of rural inhabitants in India by deploying renewable energy technologies and improving infrastructure quality. Clean energy, particularly solar and wind, could revitalize India's failing energy system. 40% of India is still not connected to the grid – a number we could eventually connect via renewable sources. The Climate Group foresees this program as a demonstration opportunity to outline the potential of renewable energy-powered, off-grid electricity access in rural India. The program aims to identify sustainable off-grid electrification models, in addition to addressing the challenges of scalability in the off-grid electrification context, and ultimately stimulate India's Clean Revolution.

ADB's Energy for All Program

The Asian Development Bank (ADB) initiated the Energy for All Program in 2008 as a response to the growing plight of the energy poor in developing Asia. It brought together like-minded organizations across Asia and formed the Energy for All Partnership, which has the objective of providing modern energy to 100 million people by 2015.

To achieve its 2015 goal, Energy for All is working internally to support its Public Sector Operations Department to include energy access as a core output of its programs across Asia and the Pacific. Energy for All is also working closely with the Private Sector Operations Department to explore equity or debt investments to companies that have energy access as a primary output of their business model. As of 2013, Energy for All's internal initiatives has resulted in USD 4.8 billion of investments, alleviating 78 million people from energy poverty.

In parallel to Energy for All's internal initiatives, the program is also matching entrepreneurs with financing institutions to facilitate private sector investment in the energy access sector. To improve the quality of the companies in Energy for All's pipeline, ADB began organizing in-country forums to utilize the local knowledge of its consultant network. Since 2013, Energy for All conducted investor forums and business model workshops in Nepal, Indonesia, Philippines and Myanmar. These efforts have contributed significantly to Energy for All development pipeline, which lists more than 90 companies and projects across Asia and the Pacific.

Background and rationale

Energy access: the challenge

Energy poverty in many developing countries continues to be a major challenge as nearly 1.3 billion people, 19% of the global population lack access to electricity, and 2.7 billion, 39% still rely on traditional three stone fires for cooking[1] (IEA, 2011). Amongst these, over 95% live in rural areas of South Asia and Sub-Saharan Africa. What is more, 1 billion will likely remain without electricity access in 2030 unless there is a drastic shift in approach. While grid extension has been the preferred option for increasing electricity access, global statistics indicate this will not be sufficient to meet the goal of universal electrification by 2030.

About 60% of additional generation needed to achieve universal access to electricity by 2030 is estimated to come from decentralised off-grid installations, either mini-grids or stand-alone. Renewable energy (RE) technologies are providing promising economic options for off-grid electrification in most rural areas. This means decentralised off-grid RE has the potential to play a central role in extending both electricity and modern forms of energy access to the underserved, and additionally stimulate socio-economic development. In addition, there are numerous opportunities to use (and where available, internet) connectivity to better manage RE technologies or systems in areas that are off-grid, connected to mini-grids, or those that do not receive a reliable power supply from the grid.

Significant investments from a broad range of sources, especially from private funding (notably business incubators, early stage investors and banks), will be required to realise this potential. To ensure investment is unlocked over the coming decades, the creation of an enabling environment is most important, particularly in the development of private enterprises which are key to reaching out to the underserved populations. In order to create an enabling environment, a range of factors are needed, including appropriate institutional and regulatory frameworks, enabling policies, sustainable financing and business models, capacity building, and technology adaptation. The creation of this enabling environment requires cooperation and dialogue between different stakeholders, in order to identify challenges and possible mitigating measures.

Stakeholders in energy access enterprise development

There are numerous stakeholders that play significant roles in the support system for energy access entrepreneurs. The initiative was successful in bringing together representatives from majority of these stakeholder groups to the various workshops.

- Entrepreneurs
  - Small-scale, village-level entrepreneurs (VLEs)
  - Entrepreneurs who own and run larger businesses spread across several regions
- Governments
  - Link various stakeholders and act as a facilitator and enabler through policies, regulation and incentives.
  - Local governments, state nodal agencies, panchayats and blocks

[1] International Energy Agency, IEA, 2011 Key World Energy Statistics, Paris, 2011

- Financial Institutions
  - Provide credit for both entrepreneurs and customers
  - Commercial banks, international financial or non-banking financial institutions, micro-credit organizations and individual or institutional investors.
- R&D and technical organizations:
  - Continuous involvement of R&D organizations.
  - So as to ensure that technologies require minimal operation & maintenance; and are adaptable to local conditions; cost-effective & reliable
- Policy organizations, industry associations
  - Facilitator by recommending policies and technologies and by lobbying for these with governments and other decision-making bodies
  - Links policy makers to various other stakeholders
  - Mobilize more accessible sources of funding
- Suppliers, contractors
  - Should be able to source materials, equipment and devices at minimal cost, and help achieve economies of scale by facilitating bulk buying by entrepreneurs
- Non-government organisations (NGOs)
  - Could be sales and marketing channels; alternative model to VLE's
  - Capacity and capability building for implementation / monitoring / awareness generation activities for energy access projects
- Community
  - Targeted beneficiaries of the proposed energy access program
  - Need to be empowered to perceive the large future benefits of energy access
- Incubators and business development organizations
  - Comprehensive training (business development, operations, sales and marketing, etc.) – these are critical skills required by entrepreneurs
  - Assistance with raising funding from sources such as venture capital

Experiences from India as a learning platform

India has taken many steps to promote off-grid renewable energy solutions to address the issues of energy access. Several Government agencies, NGO's, entrepreneurs and financing institutions have been successful in providing electricity through renewable sources across the country. A number of research institutions and centres of excellence created by the Ministry of New and Renewable Energy (MNRE), Government of India, have utilized their skills for improving technology for use in small businesses and several urban local issues have also been solved using renewable technology. In addition, India has the presence of business incubation centres that are starting to be recognized globally in the supporting entrepreneurs. Two such incubation centres – the Centre for Innovation Incubation and Entrepreneurship (CIIE) at IIM Ahmedabad and SELCO Incubation Centre have been an integral part of this programme.

Many projects have benefitted from the several incentives provided by the government at both the central and state level. These projects have been largely commercially sustainable with an add-on package of improving the livelihoods and consequently the living conditions of the users. They offered employment

opportunities, improved medical facilities and an opportunity for the villagers to broaden their horizon of working. Most importantly, a number of these projects have busted the myth that the rural people cannot afford and maintain technology and that it is not possible to run a commercial venture that fulfils a social objective. These renewable energy projects have reached out to both rural as well as the urban areas.

Within the Indian context, various business models promoted by MNRE have demonstrated through practice how renewable energy can prove to be the most appropriate, scalable and optimal solution for providing power to thousands of remote villages and hamlets. These initiatives also show the way for the developing world that off-grid renewable can offer good solution to the issue of energy access. These projects are based on various renewable energy technologies and devices, such as improved cook stoves, biogas plants for various applications, biomass gasifiers using different feedstock's, solar photovoltaic lighting, solar thermal water heating systems and water mill from different parts of the country, appropriate to rural areas and capable of providing access to clean energy in rural areas in other parts of developing world as well. The innovativeness is not only in the technology application for various end uses but also in developing and implementing a sustainable delivery and revenue model.

In addition, India has also a well-known group of entrepreneurs and businesses who have created a name globally in the provision of off-grid services to the rural areas. Some of them are SELCO (solar), Husk Power (biomass), Mera Gaon Power (solar), Abellon Clean Energy (biomass), ARTI (improved stoves for businesses), and Prakti (Improved stoves) amongst others. The reach of SELCO has been widely acknowledged globally and a Business Incubation Center has been established to transfer the knowledge locally to other entrepreneurs. For example, in 2014, 32 entrepreneurs and business development managers from financial institutions in ECOWAS region (West Africa) were brought together to participate in a hands-on training programme focussing on decentralized photovoltaic business models by SELCO Business Incubation Center that comprised of a theory and practical phase in Ouagadougou, Burkina Faso and field training in India. One of the main learning was the increased understanding of entrepreneurs regarding the importance of adapting technology solutions to meet the need of the consumer coupled with after sales service and the understanding of participants from financing institutions regarding the market and technology risks, and expected to lead to an increased flow of finance to the entrepreneurs. In addition, 2iE Foundation's Business Innovation and Incubation Centre in Burkina Faso was identified to job shadow the incubation business model of SELCO for possible application in ECOWAS. 2iE has representation in a number of countries in ECOWAS region and is better suited to support future entrepreneur training activities.

Similarly, other incubation centers such as the Centre for Innovation Incubation and Entrepreneurship (CIIE) based at IIM Ahmedabad are initiating innovative approaches to support clean technology businesses. Such a wide breadth of knowledge, experience and links to investment potential will be valuable for other Asian regions, as well as Africa.

Project objectives and outcomes

IRENA has a commitment to support entrepreneurs through its ongoing capacity building initiatives to strengthen enterprise development and linkages with financial institutions as renewable energy entrepreneurs require a favourable environment to be successful through access to finance, facilitation of technology and business model delivery on innovative approaches, and enhancing entrepreneur's skills and knowledge. To further the capacity building efforts, IRENA in partnership with CIIE designed the knowledge

transfer project with the **key objective** to '*share the existing knowledge and best practices from India with other regions in Africa and Asia targeting the incubation centers and renewable/industry associations to achieve wide coverage and support renewable energy entrepreneurs and business development*' through a sustainable model. The project also focussed on South Asia and East Africa, both regions having the highest percentage of population without energy access coupled with the rise of the private sector in delivering modern energy services.

The **outcomes** envisaged through the proposed initiatives were:

- Increase RE portfolio of up to 5 incubation centres in Asia and Africa
- Support knowledge exchange from India's best entrepreneurs and incubation centers (10) to at least 10 energy entrepreneurs in the energy access space in Asia/Africa.
- A detailed road map outlining the challenges identified and potential solutions based on learnings from India experience
- Training programme for Incubation centers/ entrepreneurs/ Industry Associations
- A network of incubation center/entrepreneurs developed to sustain the initiative beyond project period

The initiative would **target**:

- **Incubation centers** – if not focussed on renewable energy, will be able to introduce RE support in their portfolio
- **Renewable energy industry associations** – these could also include solar association, biogas associations, and renewable energy associations. Many of these associations are still at an infancy and need capacity building.
- **Entrepreneurs** – from West Africa, East Africa, South Asia (possibly SE Asia)

The initiative was planned to be implemented in a phased approach. The first phase will be to map the demand (who is interested and to learn about what particular aspect of Indian best practices- delivery model, financing strategy, technology etc.) among the key target constituents of the project to learn from Indian best practices, understand their needs and develop a knowledge sharing/ capacity building program. The second phase of the project would focus on development of network of incubation centers for hand holding and knowledge transfer.

Activities of the project: key messages and outputs

Under an agreement with the DFID-KPP, the CIIE and IRENA were to focus on the first phase of bringing in stakeholders from Africa and Asia to share India's experience in the energy sector in Manila during the International Off-Grid Renewable Energy Conference (IOREC). However, there were follow up activities in quick succession mainly through IRENA's support and also with additional partners – ADB, SELCO and The Climate Group. Three key workshops and trainings were held as part of the initiative within the 7 month project period. The activities were sequenced and designed following the inputs from the different stakeholders involved. These programmes are outlined below:

Activity	Main partners	Outputs
Workshop - Best Practices in Decentralised Renewable Energy Access: Sharing Knowledge for Renewable Energy Enterprise Development, 15th June 2014 followed by participation at the **International Off Grid Energy Conference (IOREC)** – 16-17th June in Manila, Philippines	▪ IRENA ▪ CIIE ▪ Asian Development Bank ▪ DFID-KPP	▪ 43 participants from 35 organizations in South Asia and Africa, representing incubators, entrepreneurs, investors, NGOs and donors ▪ Built up linkages between regional accelerator programmes for knowledge sharing ▪ Twinning of incubation centres between India and East Africa, whereby each could learn from the other ▪ Supported the formation of a knowledge sharing forum and assisted in the creation of awareness to scale up the reach of enterprises ▪ Networking and sharing of best practices with cross-border industry associations – signing of MoUs amongst regional renewable energy associations to share capacities and best practices. ▪ Setting up of a regional industry association in East Africa.
Training - Building energy businesses: knowledge sharing sessions with business incubators and entrepreneurs from Asia & Africa', 22nd to 27th of September, 2014, Bangalore, India	▪ IRENA ▪ CIIE ▪ SELCO ▪ DFID-KPP	▪ 30 participants from 11 business incubators, 2 renewable energy associations and 10 energy enterprises from 8 countries within Africa and Asia - Kenya, Tanzania, Uganda, Egypt, Bangladesh, Myanmar, Nepal and India. ▪ Participants were exposed to multiple models of support that could be provided to energy enterprises, with sessions and talks that delved deep into challenges and aspects of each of these. SELCO and CIIE models for incubators and entrepreneurship support discussed in detail. ▪ Participants agreed to explore the creation of regional networks for sharing mentors, deal flow, and best practices in skill development, investment and funding opportunities. A Linkedin group formed. ▪ A letter of intent towards sharing of knowledge and

Activity	Main partners	Outputs
		resources was signed between 13 organizations that were part of the project. This letter outlined activities that could facilitate further sharing of best practices, provided funding could be made available to the parties to facilitate the same.
Workshop – Workshop to facilitate knowledge sharing amongst South Asian Regional Renewable Energy Associations and to initialise South Asia Network for Clean Energy (StANCE)	▪ IRENA ▪ CIIE ▪ The Climate Group ▪ DFID-KPP ▪ Dutch Postcode Lottery	▪ Attended by over 25 delegates from Bangladesh, India, Myanmar, Nepal, Pakistan and Sri Lanka including from IRENA and IIM Ahmedabad out of which 14 representatives from renewable energy and clean energy associations. ▪ Creation of a regional network/alliance of renewable energy practitioners, associations and support organizations in South Asia (South Asia Network for Clean Energy - StANCE). Knowledge from StANCE could be beneficial for the creation of similar alliances in Africa. In East Africa, RE Associations from 5 countries have formed an alliance and potential synergies for sharing knowledge and information exists between the two regional associations.

As can be seen from the table above, IRENA and CIIE has been working together to bring a cohesive plan of bringing in key stakeholders from India, and from other parts of South Asia and East Africa. In the first workshop, IRENA took the opportunity to link in the knowledge transfer event as a pre event of the second edition of the International Off-Grid Renewable Energy Conference and in partnership with the Asian Development Bank in Manila, Philippines on the 15 of June 2014. Participants also engaged with a wider set of stakeholders on energy during the main IOREC event (16-17 June 2014) represented by key stakeholders from across the off-grid renewable energy value chain, including representatives from rural electrification agencies, ministries in charge of renewable energy development, the private sector, academia, financing institutions and international organisations. The platform provided by IOREC presented the perfect opportunity to initiate and facilitate knowledge transfer and exchange of India's successful experience in off grid renewables to other countries in Asia and Africa. It has been shown that local entrepreneurship can benefit considerably from best practices sharing from champions to encourage and mentor local entrepreneurs.

The Manila meeting brought together for the first time business incubators and renewable energy associations from Asia and Africa together. Prior to the meeting, IRENA interviewed business incubation centers and RE Associations from these regions through one on one online meetings and invited key ones who were working on energy or had the potential to work on energy. CIIE also reached out to the entrepreneurs and incubators, including clean energy associations in India. At the end, the 43 participants were represented by 8 RE Associations (5 from South Asia, 3 from East Africa), 8 business incubators (2 from India, 6 from Africa), 6 NGOs, 6 fund managers and funding agencies, 2 Government, and 5 enterprises mainly from India. The workshop was held with an intention to gauge the demand from the key stakeholders during the IOREC event to plan and target the subsequent phase of actual knowledge/ skill transfer.

Experiences were shared with a high participation from India (16 out of 43), where a number of research institutions and centres of excellence have been created by the Ministry of New and Renewable Energy (MNRE) to improve the use of renewable energy technology by small businesses and their business models. In particular, India also has a well-known group of entrepreneurs and businesses who have created a name globally in the provision of off-grid energy access services to rural areas. Representatives from SELCO, Mera Gaon Power and Ashden collective provided insights into business delivery models for energy enterprises. In addition, the SELCO Incubation Centre and CIIE based at IIM Ahmedabad shared their innovative approaches. The CIIE supports clean technology businesses, such as, through an accelerator programme for cleantech start-ups and through the setting up of a US$25 million cleantech-focused venture fund. Both SELCO and CIIE discussed their business incubation models, in addition to the Kenya Climate Innovation Centre (CIC), the Unreasonable Institute East Africa, and 2iE Technopole from Burkina Faso. During the IOREC Conference, group meetings were held separately to discuss future collaborative actions between the different incubators and energy associations. The incubators in India are more advanced in their delivery of programmes and investment support, and a more intensive learning experience from them was added as a need by other incubators from Africa.

During the Manila workshop and group discussions following it, four key areas of brainstorming took place on "challenges" and "opportunities", and to arrive at collaborative specific "action points" for potential partnerships between institutions and experts working in energy access. These were as follows:

- Business incubators: The creation of a knowledge sharing platform and sharing each other's experiences and tools to provide advisory support was recognized by all. Incubators from India and Africa also wanted to have 'twinning arrangements' whereby each could learn from the other, arrange for exchange visits for staff, and 'shadow' entrepreneurs as they grow in their businesses. They were also interested to share deal flows between and amongst incubators, across regions; showcase collaborative angel investment for enterprises and angel investors from both regions.
- Industry associations and related organizations: Networking and sharing of best practices with cross-border industry associations – signing of MoUs amongst regional renewable energy associations to share capacities and best practices were follow up actions proposed. Most RE Associations know how to work in their own countries, and this knowledge sharing within regions would be a key first step as it would be efficient. Because of the regional specifications and needs, setting up of regional industry association in East Africa; and similarly in South Asia was recommended to gain the right outcomes. Industry associations felt that finance and standards are important to them, and experiences in both could be shared in a coherent manner if they are organised in regions, and between regions.
- Entrepreneurs, investors, and related organizations: Developing new models for financial innovation, such as exploring blended capital funds, tapping into corporate social responsibility funds, and setting up crowd funding platforms were shared mostly by the participants from India. Many energy access entrepreneurs also need guarantee structures to support the initial entry into the rural market space. One of the challenges that entrepreneurs and investors felt was advocacy for government policy reform to address the disparity between support provided to on-grid power producers and off-grid operators. It is important for both the entrepreneurs and financing community that regulatory frameworks and governance support is absolutely necessary and in almost all countries, there was a clear need for more. Entrepreneurs also discussed about advocating the promotion of priority sector lending to energy access entrepreneurs; and to creating a platform to share knowledge to replicate

proven business and financial models. Even in India, many businesses are still on the learning curve, and the lessons learnt can be valuable for neighbouring countries and other regions.

- Supporting Institutions:_National governments, and donor entities could assist the entrepreneurs, incubators, and investors to hold coordination meetings; support knowledge sharing platforms/forums and assist in the creation of awareness to scale up the reach of enterprises both at the institutional and consumer level. It was also felt that collaborations need to increase among like-minded agencies to support knowledge and skills enhancement especially focused on enterprise development.

Following the discussions in Manila, it was clearly felt that the business incubator models of SELCO and CIIE supporting renewable energy and energy access entrepreneurs, could be shared in more detail with other incubators from South Asia and East Africa. A week long training was conducted from the 22-27th of September 2014 bringing together about 30 participants from 11 business incubators, 2 renewable energy associations and 10 energy enterprises from 8 countries within Africa and Asia - Kenya, Tanzania, Uganda, Egypt, Bangladesh, Myanmar, Nepal and India. Energy entrepreneurs who attended the training were incubatees of the respective incubation centers. One of the biggest lesson learned from the SELCO model was the importance of developing a holistic ecosystem approach, and this was also experienced through field site visits interacting with those involved in the supply chain – financing institutions, dealers, and also consumers. SELCO valued the ecosystem approach (encompassing a spectrum of issues facing energy enterprises ranging from operationalizing the business to policy support) to be a major requirement across the growth stages of the enterprise.

A notable outcome of the Bangalore training program included commitment from the incubators to establish inter- and intra-regional partnerships for knowledge sharing and collaboration. The entrepreneurs on their part committed to establishing a peer platform to learn from similar enterprises operating elsewhere. Some of the key challenges faced by enterprises and incubators although are distinct and specific to the conditions they operate in, there were some common elements that emerged out of the discussions. These elements were reported to require solutions that target the energy enterprise ecosystem as a whole. A summary of these challenges is captured in a tabular format below:

	Enterprises	Incubators
Finance	Access to finance and investments across growth stages	Funding and financing challenges to stay operationally sustainable
Infrastructure	Lack of infrastructure including banking and rural connectivity	Resources for operational support, banking and rural connectivity
Talent	Absence of a pool of trained human resource both technical and general	Attracting and managing multi-functional teams to service incubatees
Policy	Lack of coherent Government policies and support for SME's	Absence of common platform to influence policy

Experiences of SELCO and CIIE were highly valued as a learning experience by the participants, and a series of discussions evolved around financing, selection of incubatees, approaches, mentorship, sustenance of

operations amongst other topics. Incubators are varied in their structure and models and rightly so as contextual challenges are varied and it would be hard to find an “ideal incubator model”. The approach of taken to evaluate the input to output/impact ratio to gauge the success of the model in addition to applying relevant sustainability metrics has proven to be effective from the India experience. It was also felt that a multifunctional team can be leveraged by incubators to offer complementary services to its incubatees and also provide its core services like deal sourcing, investment facilitation, etc., to third-party organisations to generate revenue for sustaining its operations. CIIEs experiences of investment facilitation was also discussed in detail, whereby in the initial phase, incubators must facilitate financing through debt, guarantees, etc., for working capital needs followed by mediation for investments at the start-up phase. Further, based on the needs of the entrepreneurs supported, incubators can set up seed or venture capital funds on their own.

Entrepreneurs from India and Africa also shared their experiences and felt that they should work with incubators whose mission and objectives aligned with their own. Access to financing especially for seed stage risk capital and for the growth phase was identified as most difficult and entrepreneurs shared their own experiences with raising capital. The entrepreneurs felt that they need to have internal processes to monitor the after sales services, distribution mechanics and also financial control even during periods of increased cash flow and funding to be successful. Entrepreneurs also felt the need to perform due diligence on investors to align business missions accordingly. They also felt that traditional training modules like exhaustive toolkits are time-consuming for entrepreneurs and should be simplified and re-configured as topic-wise mentoring for the management and shadow-training for quality human resource at multiple levels. The training programme was highly appreciated and similar cross learning from Africa was also proposed by the participants. Some Africa participants also arranged a field visit with a CIIE incubatee to follow up with potential technology transfer from India to East Africa on solar water pumping systems.

Following the Bangalore workshop, and the Manila recommendations to set up a regional platform for industry and clean energy associations, IRENA and the Climate Group organised a two day workshop on 10-11 of November 2014 in Kathmandu, Nepal. The meeting brought together over 25 delegates from Bangladesh, India, Myanmar, Nepal, Pakistan and Sri Lanka including from IRENA and IIM Ahmedabad to explore in-depth the rationale, scope, objectives and activities including organizational issues related to the establishment of an apex network of clean energy associations and other stakeholders in South Asia. The proposed apex network, titled StANCE (South Asia Network for Clean Energy) is expected to provide a regional platform for clean energy associations comprising members from business, civil society and academia to exchange information and consult on policies, technologies and financial mechanisms for the accelerated uptake of clean energy (renewable energy and energy efficiency) in South Asia. In South Asia, there already are a number of government and non-government led coalitions in these countries such as the Alternate Energy Promotion Centre (Nepal), Bangladesh Solar and Renewable Energy Association (BSREA), Renewable and Alternative Energy Association of Pakistan (REAP) and the recently formed Clean Energy Access Network (CLEAN) in India to name a few. However, strategic involvement of the industry associations and private sector is still limited.

Significant knowledge can be shared amongst the countries and networks, especially from India where a clear need is emerging to create a concentrated effort in energy access. The absence of a regional alliance of clean energy stakeholders has been perceived as a key constraint. It is envisaged that through the establishment of StANCE this gap would be filled and a platform created to strengthen clean energy cooperation within the

region. (StANCE countries include Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka). While the areas of cooperation could be broad it was the unanimous opinion of the workshop participants that the value proposition of the network and its acceptability lay in its ability to mainly address the issue of energy access in rural and urban areas of the South Asian countries through the application of off-grid/micro-grid clean energy systems.

During the Kathmandu workshop, India-centric presentations were delivered by four key Indian renewable energy sector associations which included Indian Renewable Energy Federation (IREF), Clean Energy Access Network (CLEAN), Ashden India RE Collective (AIREC) and National Solar Energy Federation of India (NSEFI). The presentations provided insights about the key energy challenges for India and the present scenario. Following formed the background for the India centric discussion:

- Rising energy demands almost at a rate of 6%-7% per year
- Lack of energy security because of high dependence on imports (80%-90% import oil dependence, 40%-50% import coal dependence)
- Burden on the economy due to high import costs
- Lack of access to energy, almost 45% of households lack energy access in India
- Climate Change: Increasing global pressure

Some of the lessons learnt from India were:

- Ambitious renewable energy programs, and needs to include the sub-regional governments for efficient implementation
- Maximization of electricity production from renewable resources. However, energy demands can simultaneously be reduced by energy conservation, energy efficiency and promoting green buildings.
- Reduction in the subsidies
- Provide energy access through renewable energy technology promotion. There should also be a focus on renewable technologies such as biomass/micro-hydro/cook stoves etc. rather than only on solar energy.
- The focus on solar should not be only on rural energy but also on decentralized generation including rooftop products and services
- Ambitious and detailed policies to be followed by legislations and penalty clauses for inaction
- Key policy instruments such as performance based subsidy, net metering, generation based incentives (GBI) and aspiring for grid parity for RE decentralized generation can prove to be effective in promoting renewable energy

Some of the other issues discussed during the India specific session were the need of a knowledge portal, incubation centres and potential centres of excellence that India could anchor for StANCE. Documentation and information related to the founding, objectives and activities of StANCE will be shared with relevant stakeholders from Africa, especially participants in the Manila and Bangalore workshops, provided funding is available for the same. Sharing of knowledge is crucial for such initiatives.

Key outcomes

All the outcomes envisaged through the proposed initiatives were achieved successfully:

- *Increase RE portfolio of up to 5 incubation centres in Asia and Africa* – Out of the six incubators from Africa, four in particular were in early phases and are in the process of incubating energy businesses. Incubation centers from Nepal and Bangladesh are also in the process of including energy and clean energy companies for accelerator programmes and investments.

- *Support knowledge exchange from India's best entrepreneurs and incubation centers (10) to at least 10 energy entrepreneurs in the energy access space in Asia/Africa*. The three programmes brought together 14 renewable energy/clean energy associations from Asia, 3 renewable energy associations from East Africa, 11 business incubators, and 15 energy entrepreneurs. Workshops and training programmes also included donor agencies, NGO and Government representatives. The knowledge flow focused on India's experiences and reached out to 4 African countries (Burkina Faso, Kenya, Tanzania, Uganda); and 6 Asian countries (Bangladesh, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka). Major focus of regions being South Asia and East Africa.

  The incubators are getting into "twinning" arrangements which will include knowledge sharing, process sharing, and additionally deal flows, at a later stage. The CIIE and Chandaria Business Incubation Center from Kenya are signing a MoU and have already started to learn from each directly. A visit from Bangladesh incubator to CIIE for one of the accelerator programmes has also taken place. Incubators from East Africa themselves are also sharing information and knowledge with each other through these interactive programme. The Kenya Climate Innovation Center (CIC) and Unreasonable Institute Eastern Africa agreed to share deal flows. Information is shared regularly between the incubation centers on financing opportunities for their incubatees. A webinar is planned in February 2015 for incubators to discuss the actions they are taking as they move forward with their programmes.

- *A detailed road map outlining the challenges identified and potential solutions based on learnings from India experience*: CIIE has produced a report on the India experience but has also included profiles of Africa incubators and entrepreneurs. The training for incubators and entrepreneurs was designed by IRENA, CIIE and SELCO to address some of the challenges that were discussed in the Manila workshop.

- *Training programme for Incubation centers/ entrepreneurs/ Industry Associations:* The SELCO Incubation Center came on board to co-host the next workshop in Bangalore, along with CIIE and IRENA. The workshop was organized from 22-27 September 2014. After some deliberations, it was decided to focus only on business incubators from Africa and South Asia, the Africa ones being those that were present at the Manila workshop. Each incubator was asked to nominate one entrepreneur who will accompany them for the workshop. The primary objective for the workshop was to share experiences, and also those of other experts and entrepreneurs from India, who are active in the energy access space. The workshop led to knowledge sharing on various incubator models, energy entrepreneurship in India, as well as field visits to micro and small energy entrepreneurs in Bangalore.

- *A network of incubation center/entrepreneurs developed to sustain the initiative beyond project period*: Post the Manila workshop, the incubators group met together on the side-lines of IOREC to discuss how to move forward on the action points. They have decided to form a knowledge sharing group, including a web platform to share tools and ideas, plans etc. An initial Google Group named IndiAfrica Incubators has been set up. In Bangalore, the training session was concluded with a letter of intent signed by twelve of the participating incubator vehicles to initiate a knowledge sharing platform that can concretize the action items that were agreed upon during the workshop. A LinkedIn platform has been initiated to share knowledge and information by members, currently a closed group. Direct exchange of information is regularly held between the incubators sharing know-how on investments, mentorship etc.

  The project also lent support to the creation of a regional network/alliance of renewable energy practitioners, associations and support organizations called South Asia Network for Clean Energy (StANCE). Knowledge from StANCE could be beneficial for the creation of similar alliances in Africa. The East Africa industry associations proposed to form a formal group, with a link in to, possibly through the South Asia Alliance once set up. This is ongoing with RE Associations from Uganda, Kenya, Tanzania, Rwanda and Burundi establishing a Regional Renewable Energy Association called the East African Renewable Energy Association (EAREA).

Next steps

- Entrepreneurs working in similar/related sectors will also be introduced/paired with each other by the incubators, whereby one can 'shadow' the other in their business and growth, and share experiences and ideas.
- Africa industry associations proposed to form a formal group (ongoing), with a link in to, possibly through the South Asia Alliance once set up. It was proposed to keep them separate from the incubators group, but there will be cross-linkages.
- Strengthen the regional networks for sourcing deal flow, sharing pool of mentors, sharing best practices on skill development, investment opportunities, opening up investor networks, and grants
- Provide inputs in creating similar existing seed funds in participating incubation centres with other centres who do not have one to support the operations of enterprises and incubators especially in the initial stages
- The South Asia Network for Clean Energy (StANCE) has been initiated and will be used as a vehicle to share knowledge with other regions. The recently formed CLEAN alliance from India is also a member. Further details on memberships, host country for registration of the network, drafting detailed bylaws and constitution are being followed up by the Climate Group. It was agreed by the participants that three working groups would be established in each of the following areas to finalize the activity areas and prioritize the implementation plans and deliverables. The WGs and their respective convening members are:
  i. Knowledge sharing and Policy Advocacy
  ii. Access to Finance
  iii. Technology & Innovation

- Create a communication platform that can inform and foster cross-border partnerships among incubators and incubatees. IRENA's learning gateway – IRELP – could host webinars for the groups and the first one is taking place on the 9th of February 2015. Further webinars can be hosted by IRENA.
- Design accreditation for incubatees to provide a stamp of approval
- Provide inputs in creating customised training manuals as a reference that capture specific aspects of enterprise development and facilitation of virtual mentorship for entrepreneurs working in remote areas. These must be modular with examples and not complicated.

ANNEX 1: PARTICIPANT LIST OF WORKSHOPS/TRAINING

Manila workshop participant list, June 2014

Institution	*Name*	*Country*
Bright Green Energy Association	Dipal Baruah	Bangladesh
Bangladesh Rural Electrification Board	S. M. Zafar Sadeque	Bangladesh
2iE Technopole, Burkina Faso	Elodie Hanff	Burkina Faso
SunMoksha	Ashok Das	India
Ashden India Renewable Energy Collective	Hemant Lamba	India
Development Alternatives	Rashi Verma	India
Centre for Innovation Incubation & Entrepreneurship	Mohsin Bin Latheef	India
Infuse Ventures, India	Vibhor Dhanuka	India
Nuru Energy	Deepak Punwani	India
Arc Finance	Srey Bairiganjan	India
Centre for Innovation Incubation & Entrepreneurship	Samkit Shah	India
Department for International Development (India)	Aloke Barnwal	India
Mera Gaon Power	Brian Shaad	India
SELCO Incubation Centre, India	Sarah Alexander	India
The Climate Group	Pallassana Krishnan	India
The Climate Group	Jarnail Singh	India

Institution	*Name*	*Country*
GIZ India	Santosh Kumar Singh	India
cKinetics	Upendra Bhatt	India
Kenya Renewable Energy Association	Aisha Abdulaziz	Kenya
Chandaria Business Incubation Centre, Kenyatta University	George Kosimbei	Kenya
Climate Innovation Centre, Kenya	Serah Nderitu	Kenya
Nepal Biogas Promotion Association	Lok Nath Ghimire	Nepal
Solar Electric Manufacturers Association Nepal	Dipak Bahadur Shahi	Nepal
National Association of Community Electricity Users, Nepal	Dilli Ghimire	Nepal
Alternative Energy Promotion Centre, Nepal	Nawa Raj Dhakal	Nepal
Renewable & Alternative Energy Association of Pakistan	Shahid Bokhari	Pakistan
Asian Development Bank	Anthony Jude	Philippines
Asian Development Bank	Jiwan Acharya	Philippines
Asian Development Bank	Elmar Elbling	Philippines
Asian Development Bank	Coy Navarro	Philippines
SEEDlinks Philippines Inc.	Mila Jude	Philippines
Asian Development Bank / Infuse Ventures	Daniel Hersson	Singapore
Impact Investment Exchange	Robert Kraybill	Singapore
Tanzania Renewable Energy Association	Godwin Msigwa	Tanzania
Institute of Management and Entrepreneurship Development, Tanzania	Donath Raphael Olomi	Tanzania
Small Industries Development Organization	Omar Bakari	Tanzania
IRENA	Kavita Rai	UAE
IRENA	Gauri Singh	UAE
Unreasonable Institute East Africa, Uganda	Joachim Ewechu	Uganda
Renewable Energy Association of Uganda	Emmy Kimbowa	Uganda
The Climate Group	Subaskar Sitsabeshan	UK
Accenture	Caroline Narich	UK
UN Foundation	Tripta Singh	USA

Bangalore training participant list, September 2014

Institution	*Name*	*Country*
Climate Innovation Center, Kenya	Serah Nderitu	Kenya
Entrepreneur from CIC (Coacatech Enterprises)	Collins KyaloKamole	Kenya
Chandaria Business Incubation Center	George Kosimbei	Kenya
Entrepreneur from CBIC	Joab Oito	Kenya
The Unreasonable Institute, East Africa	Joachim Ewechu	Uganda
Entrepreneur from UI (Village Energy)	Abubaker Musuuza	Uganda
Renewable Energy Incubator, Makere University	Shira Bayigga Mukiibi	Uganda
Small Industries Development Organization (SIDO)	Kalumuna Benedicto	Tanzania
Entrepreneur from SIDO	Mussa Kayungi Abdul	Tanzania
Institute of Management and Entrepreneurship Development (IMED)	Francis Julius Rwebogora	Tanzania
EGG Energy	Jamie Yang	Tanzania
The Industrial Technology and Innovation Council - Ministry of Industry, Trade and SME's	Hanan El-Hadary	Egypt
Egypt National Cleaner Production Center - Ministry of Industry, Trade and SME's	Mohamed Ahmed Salem	Egypt
SELCO Entrepreneur (Mangaal)	Soraisam Devakishor Singh	India
Biruwa Ventures, Pvt. Ltd.	Vidhan Rana	Nepal

Institution	*Name*	*Country*
One to Watch	Niraj Khanal	Nepal
One to Watch	Willem Grimminck	Nepal
Indigo Energy	Allen Himes	Myanmar
CIIE, IIM Ahmedabad	Mohsin Bin Latheef	India
CIIE, IIM Ahmedabad	Vipul Patel	India
CIIE, IIM Ahmedabad	Harshad Sambamurthy	India
CIIE Entrepreneur (ONergy)	Piyush Jaju	India
CIIE Entrepreneur (Surya Power Magic)	Abhilash Thirupathy	India
Bangladesh - BizCube	Minhaz Anwar	Bangladesh
Bangladesh - Bright Green Energy Association	Dipal Chandra Barua	Bangladesh
Ashok Das	Ashok Das	India
IRENA	Kavita Rai	UAE
IRENA	Tijana Radojicic	UAE
DFID India	Gregory Briffa	India
DFID India	Aloke Barnwal	India
IPE Global	Indira Khurana	India
GIZ	Nilanjan Ghose	India
GIZ	Hari Natarajan	India
Infuse Ventures	Shyam Menon	India
SELCO	Kanchana V.	India
SELCO	Harish Hande	India
SELCO	Ashis Sahu	India
SELCO	Revathi K.	India
SELCO	Sudipta Ghosh	India
SELCO	Sreeharsha	India
SELCO	Jagdish Pai	India
SELCO	Surabhi	India
SELCO	Thomas Pullenkav	India
SELCO	Ravi Kanth	India
SELCO	Senthil A. Kumar	India
SELCO	Susmita Bhattacherjee	India
SELCO	Arvind Balaji	India

Kathmandu workshop participant list, November 2014

Institution	*Name*	*Country*
Indian Renewable Energy Federation	Ajit Pandit	India
The Climate Group	Arvindan Lakshmikumar	India
Clean Energy Access Network (CLEAN)	Ashish Kumar Sahu	India
Mera Gao Power	Brian Shaad	India
National Solar Energy Federation (NSEF)	Deepak Gupta	India
Asian Development Bank	Devendra Adhikari	Nepal
Nepal Biogas Promotion Association	Dilip Kumar Acharya	Nepal
Solar Electric Manufacturers Association Nepal (SEMAN)	Dipak B Shahi	Nepal
Bangladesh Solar and Renewable Energy Association (BSREA)	Dipal Barua	Bangladesh
Government of India	Gauri Singh	India
Solar Electric Manufacturers Association Nepal (SEMAN)	Hari C Aryal	Nepal
Rural technology. Producers'. Association Nepal	Hasta Pandit	Nepal
The Climate Group	Jarnail Singh	India
Janathakshan	Jeinulabdeen Fahima	Sri Lanka
Asian Development Bank	Jiwan Acharya	Philippines
Solar Thermal Energy Association Nepal	K R Khanal	Nepal
International Renewable Energy Agency (IRENA)	Kavita Rai	Abu Dhabi
Center for Innovation Incubation and Entrepreneurship (IIM Ahmedabad)	Mudit Narain	India
Independent expert, Myanmar	Myat Thaw Tar Tun	Myanmar
Alternate Energy Promotion Centre	Nawa Raj Dhakal	Nepal

Institution	*Name*	*Country*
Micro-Hydro Association of Nepal	Prashun Bajracharya	Nepal
Centre for Energy Studies, Institute of Engineering	Prof. Jagan Nath Shrestha	Nepal
Independent expert, Myanmar	Renato Tavares	Myanmar
Solar Thermal Association, Pakistan	Rizwan Kausar	Pakistan
Ashden India Renewable Energy Collective	S P Gonchaudhuri	India
Independent Expert	S Padmanabhan	India
Renewable Energy Association of Pakistan (REAP)	Shahid Bokhari	Pakistan
ICCo Cooperation	Shaika Rakshi	India
Micro-Hydro Association of Nepal	Surendra Mathema	Nepal
Gham Power	Sandeep Giri	Nepal

Annex 2: WORKSHOP/ TRAINING AGENDAS

Manila workshop agenda, 15 June 2014

Session 1: Welcome and Introductions	
Moderator: Kavita Rai, International Renewable Energy Agency	
09:00 – 09:30	**Welcome remarks from ADB, IRENA and DfID** • Gauri Singh, Director – Country Support and Partnerships, IRENA • Anthony Jude, Senior Advisor and Chair – Energy Committee, ADB • Aloke Barnwal, Climate and Environment Adviser - Energy, Climate and Growth Unit, DFID India
09:30 – 11:00	**Introductions** All participants were given 1 minute to introduce themselves briefly
11:00 – 11:20	*Break*
Session 2: Role of incubation centres as vehicles for knowledge transfer and enterprise development across regions	
Moderator: Ashok Das, Founder-CEO – SunMoksha	
11:20 – 12:00	**Building cleantech and renewable energy businesses – experiences:** • Mohsin Bin Latheef, Centre for Innovation Incubation and Entrepreneurship, India • Joachim Ewechu, Unreasonable Institute East Africa • Sarah Alexander, SELCO Incubation Centre, India • Serah Nderitu, Climate Innovation Centre, Kenya
12:00 – 12:15	**Intervention – 2iE, West Africa – on knowledge/skills transfer across regions**
12:15 – 13:00	**Panel discussion on "role of incubation centres in building energy access enterprises"** Moderator posed questions to the panellists, and invited audience questions
13:00 – 14:00	*Lunch*
Session 3: Optimizing collaboration within the Energy for All Partnership	
Moderator: Jiwan Acharya, Asian Development Bank	
14:00 – 14:15	**Energy for All - A programmatic approach to mitigate energy poverty** • Elmar Elbling – Energy for All, ADB Energy for All presented its approach and methodology to mitigate energy poverty and the tools available to overcome barriers to energy access
14:15 - 15:15	**Rationalizing the supporting infrastructure for the energy access space** • Coy Navarro – Energy for All, ADB The session helped define how services offered by each participant is situated in the broader scheme of facilitating private sector investment for the energy access sector. Gaps that persist in the investment facilitation process on a country level were also identified.

15:15 - 15:30	*Break*
Session 4: Pathway to future – developing an action plan for knowledge sharing and enterprise development in energy access	
Moderators: IRENA, CIIE, ADB	
15:30 - 16:30	**Developing an action plan (group discussions)** • **Group 1 - Knowledge and skills sharing amongst incubation centres** – key areas for support, partnerships • **Group 2 – Entrepreneurs and Investors** – needs, areas of support, regional experience sharing (technology development, business development and investment-readiness) • **Group 3 – RE Industry Associations** – role of RE associations to catalyse enterprise development, partnerships • **Group 4 -** Building a framework for collaboration between **energy access practitioners** There were four groups, each led by a moderator discussing a set of specific points in relation to knowledge sharing and enterprise development in energy access – focus was on what opportunities existed and how these can be tackled through partnerships.
16:30 – 17:30	**Presentation of discussion points and panel discussion on action plan (Moderated by Gauri Singh, IRENA)** Group leaders from previous session shared their key learnings and suggestions; interactive discussion with audience on key action going forward.
17:30 – 18:00	**Closing notes – Gauri Singh, IRENA and Jiwan Acharya, ADB**

Bangalore training agenda, 22-27 September 2014

Session	*Time*	*Points covered*	*Who/how*
Day 1 (Sept 22, Monday)			
Ice-breaking	9 to 11 AM	• Participants introduce themselves	
Introduction to the CIIE model	11 AM to 1 PM	• Running an incubator with various programmes and initiatives - ecosystem + investment - right mix	Program Managers from CIIE
Introduction to SELCO Umbrella	1 to 3 PM	• SELCO Introduction • Evolution of SELCO Incubation Centre and overview of approach • Videos	Senior SELCO Manager + Senior Advisor, SELCO Incubation Centre
Pursuing energy access businesses – experiences from India, Africa + elsewhere	3:30 to 5 PM	• Energy access business – key points (sourcing / EPC / sales & distr. / financing & payment / O&M) • What kind of support do energy access companies need to succeed? • Key areas of support required?	Panel + interactive discussion: entrepreneurs from India & Africa

Session	*Time*	*Points covered*	*Who/how*
		• What has worked well? What hasn't? • What further role can incubators play?	
	7 to 9 PM	• Networking dinner	
Day 2 (Sept 23, Tuesday)			
Mentorship for entrepreneurs	11:30 PM to 1:00 PM	• Importance of mentoring energy access businesses	Ashok Das
Lunch	1 to 2 PM		
Financing & Investment	2 to 5 PM	• Various financing options for supported entrepreneurs (seed/equity/debt/grant, etc.) – pros/cons of each type • Due diligence and seed investment: How do seed/impact investors carry out due diligence prior to investment • Case study on ONergy & SPM	PPT + interactive disc. – entrepreneurs + representatives from CIIE, Infuse & SELCO
Day 3 (Sept 24, Wednesday)			
Incubation process breakdown. with emphasis on failures	9 to 11:30 AM	• Selection: What are the strategies used to identify and select candidates? • Preparation to handle a business: HR, basic operations • End user financing: What are the different models employed? • Supply chains: Building local vendor linkages and how? • Other key challenge areas and role of the Centre	Presentation by Manager & Senior Advisor, SELCO Incubation Center
Evaluating the incubation centre (external perspective)	11:45 AM to 1 PM	• Evolution of role of an incubation center evolve as part of larger SELCO Umbrella • Overview of the approach, milestones and challenges of the centre • Moving forward	Presentation Consultant, RE and Energy Access
Sustaining business incubation	2 to 4 PM	• Various options available – government support, CSR, grants, etc. – how have CIIE & SELCO done it so far? What are the experiences from Africa and elsewhere?	Panel discussion – incubators from Asia & Africa
Day 4 (Sept 25, Thursday) - Field visit (whole day)			
• Leave by 6 AM and back by 10 PM • Places to be visited – Hassan, Karnataka (entrepreneur-streetvendor model, home lighting, institutional, banker interaction)			

Session	*Time*	*Points covered*	*Who/how*
Day 5 (Sept 26, Friday)			
Role of the SELCO Incubation Centre in building a sustainable energy enterprise	10 AM to 12 noon	• Incubator / entrepreneur perspective- Introduction to business model: need, region • Key aspects of the business model: financing/sales&distribution/ awareness/human resources • Key support areas from the Incubation Center and why • Milestones	Presentation by Maangal/ Entrepreneur
Presentation by visitors - incubators (and those interested in setting up incubators)	1 to 3 PM	• What could other incubator vehicles learn from their models? • What other practices would the incubator include? • How can partnerships be built between incubators?	Interactive
Key learnings from workshop	3 to 4 PM	• What would work well in the Africa context and Asia context?	Interactive
Day 6 (Sept 27, Saturday) - half day for conclusion with CIIE, IRENA and SELCO			

Kathmandu workshop agenda, 10-11 November 2014

Day 1: 10 November 2014

0900 – 0930: Introductory Session

- Welcome address (10 mins) – TCG
- Inaugural Remarks (10 minutes) – AEPC Nepal
- Setting the stage – Background and Genesis of StANCE (20 mins) - IRENA/TCG

0930 – 1100: Country level Clean Energy landscape mapping – Nepal, Bangladesh, Pakistan

Participants make a country level presentation to cover the following key points:

i. Country energy policy perspectives(energy access, renewables and efficiency)
ii. Growth and business opportunities for the sector
iii. Barriers faced (policy, legal and regulatory; technology; financing; institutional; skills and training; others)
iv. Existing programs, targets and results (govt., private sector, R&D, academia, civil society)
v. Existing networks and their roles as business alliances, networking &information hubs, skills and training, technology & innovation, access to finance, etc.
vi. Expectations from StANCE

1100 – 1130: Tea/Coffee Break

1130 – 1300: Country level Clean Energy landscape mapping – India, Sri Lanka and Myanmar

Same format as above

1300 – 1430: Lunch

1430 – 1500: **Regional Perspective and StANCE** (moderated session)

This session would assimilate information from the country perspectives and project the clean energy landscape of the South Asia Region (SAR). This would also map out the stakeholders from varied sectors such as civil society, governments, multi-lateral organizations (such as SAARC, ADB, WB, ICCO, USAID-SARI, IRENA, Practical Action etc.) , vendors, service providers, academia, R&D labs etc in SAR that could be pivotal in catalyzing clean energy through effective networks and in promoting regional initiatives for achieving sustainable growth. This session will be a moderated session and cover the following aspects:

i. Stakeholder alliance building: why needed?
ii. Value proposition for StANCE: what do they offer to members?
iii. Directions setting & Priority areas: what will it do?
iv. Possible mechanisms and revenue models: how will it be set up?
v. Linkage with Climate Change (mitigation + adaptation)

1530 – 1730: **Group exercise on StANCE Action Plan** (including working tea/coffee)

This will be a quasi-practical exercise. Five Groups in the following verticals will be constituted. Group 1: Technology & Innovation (Manufacturing, Testing & Certification); Group 2: Policy Advocacy; Group 3: Skills and Training; Group 4: Access to Financing, and; Group 5: Networking, Knowledge Sharing &Information Hub. The group members would have to identify scope for regional cooperation in each of these verticals and work on a case (an operational project) to understand the value that StANCE can offer to the sector. For instance, a case could be 'Learning by Sharing' for developing centres of excellence in countries for specific technologies. Nepal could become a South Asia Centre of Excellence for Micro-hydro development and provide the know-how and learnings to rest of the countries for development of practical on-ground projects. Such projects would then need financing which could be another centre of excellence with another country. Such examples would be shared the next day with the larger group during the plenary morning session

Day 2: 11 November 2014

0900 – 1030: **Plenary Presentation session of Group Recommendations from Day 1 (15 minutes/group; 30 minutes discussions)**

1030 – 1130: **Governance Structure**

- Discussion on draft Bye-law document
- Founding members/ Advisory Council
- Governing Council and decision on nature of Chair and nominations

1130 – 1200: **Tea/ Coffee break**

1200 – 1300: **Management Structure**

- Secretariat – Host organization/ Registration details
- Membership framework for StANCE (Paid/Unpaid); Interim Secretariat

1300 – 1430: **Lunch**

1430 – 1600: **Action Plans**

- 6 months delivery plan and 3 years strategy

1600 – 1615: **Tea/Coffee Break**

1615 – 1730: **Declaration signing**

- Joint declaration to be presented to Founding Members of StANCE, Discussion
- Signing Ceremony and Next Steps

1715 – 1730: **Vote of thanks**