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ADVISE FOR CHANGE

STUDY ON SOCIAL INNOVATIONS
ENABLING ACCESS TO EFFICIENT ENERGY
IN SOUTH EAST ASIA

Final report on South East Asia
based on field work
conducted between November 2014 and June 2015
in Singapore, Indonesia, Cambodia, Thailand, Myanmar,
Vietnam and the Philippines

Content

1. METHODOLOGY

In order to be able to understand the context in which innovative solutions enabling efficient access to energy are being developed in South East Asia and in order to reach out to successful social businesses in this sector, Advise for Change's team followed the following methodology:

1. **First, explore the existing literature on the sector and draft a summary note on the context.**

2. **Second, establish a mapping identifying key actors from five main categories:**

   - Public institutions financing large infrastructure projects

   - Multinational companies (MCNs) conducting BOP focused projects in the region

   - Networks supporting local social businesses through time and competencies

   - Impact investors providing funds to support the development of innovative projects

   - Successful local social businesses: Ashden awards winners, Ashoka Changemakers, entrepreneurs recommended by local networks…

3. **Third, start the interviews in Singapore as it is a hub for the South East Asian region before conducting interviews country by country (Indonesia, Cambodia, Thailand, Myanmar, Vietnam and the Philippines).**

2. ACCESS TO ENERGY IN SOUTH EAST ASIAN EMERGING COUNTRIES: A BRIEF OVERVIEW

A. GENERAL CONTEXT IN EMERGING COUNTRIES

- What is access to energy?

There is no consensus among the different studies issued by the main energy actors on what energy access precisely is. However the various definitions all encompass two main factors to identify it**: 1. access to reliable electricity and 2. access to clean and safe means of cooking**. This defines the basis of what energy access is - for households at least[5].

The notion of **access to *efficient* energy or *modern* access to energy** should not be underestimated. In some countries like the Philippines in the 70's, States have deployed large programs of electrification for the most remote areas and consequently electrification rates have raised dramatically (up to almost 90% in the Philippines[1]). However the level of service in some areas remains very low and complete black-outs can occur for hours due to financing and operating challenges faced by local energy operators. Hence the quality and reliability of supply is an additional key parameter for energy access.

Based on that definition, the link between energy access and development is pretty obvious. Having access to energy has multiple consequences: rising education levels, decreasing health problems, improving food safety… **The link to poverty reduction is even clearer**. The Asian Development Bank estimates that 20%–30% of annual income in poor households is directly spent on energy fuels in developing countries[1].

As 1.3 billion people still are without electricity and 2.7 billion people do not have access to safe and clean cooking means[5] - especially in rural areas – **the UN has called for major initiatives to achieve universal access to modern energy services by 2030.** Among the programs supported by the UN are for instance the Sustainable Energy for all program and the Global Alliance for Clean Cookstoves.

Much concern has been put on access to energy in recent years, from multi/bi-lateral actors, to multinational companies, States, social entrepreneurs or NGOs.

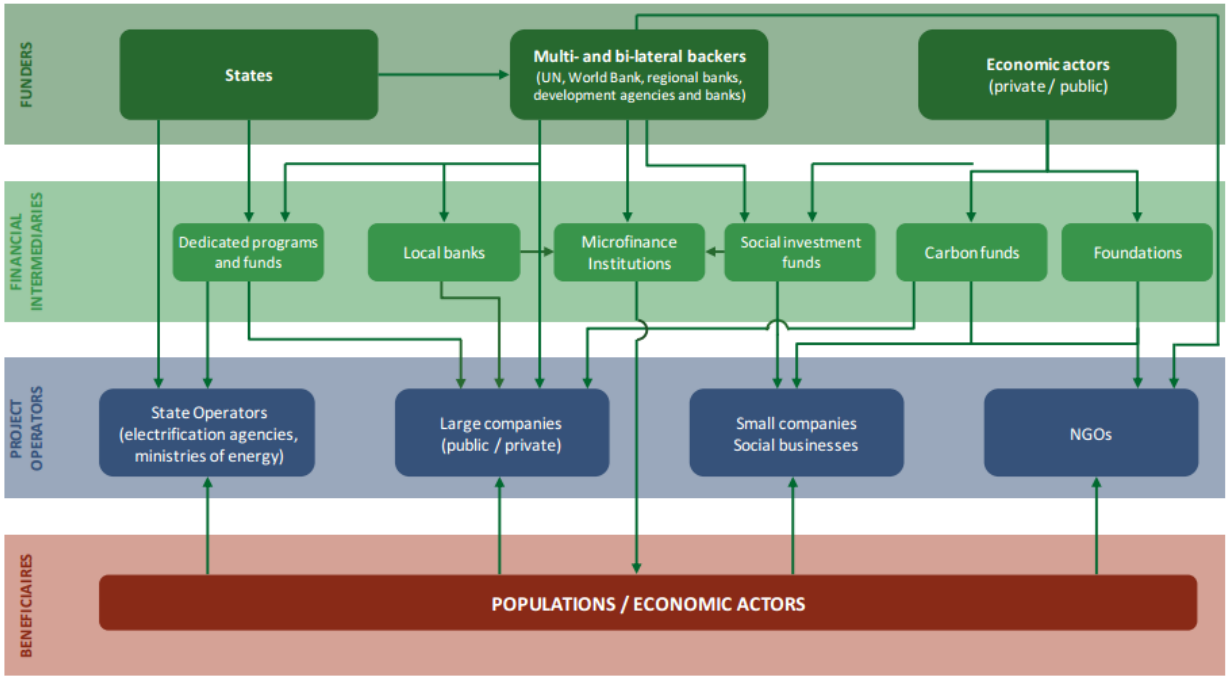
- Who are the main actors involved?

For decades, energy access has relied on one major principle: **funding and extending the grid to the largest number of persons / areas as possible** under the aegis of States and multi/bi-lateral backers. This strategy was successful for years and considered as the most efficient, reliable and less costly method to achieve the objective of universal access to energy for all.

The limits of such a strategy are obvious since the early 2000's as an increasing number of people across the world – especially the poorest – still have no or very little access to energy. Recent literature has given concrete examples of failures like India which reached only 50% of its electricity production's target[4]. The grid extension does not manage to reach the poorest people due to their remote locations or to their very limited budget dedicated to energy – in absolute value. And in many cases even grid-connected areas suffer from poor and unreliable energy supply.

The amount of investments required to reach the objective set by the UN reaches the stinking figure of $48billion yearly – more than five-times the level of 2009[5]. **The various actors engaged in energy access cannot meet that ambitious target if they still rely on the traditional vision of development**. Even the World Bank's lending capacity on energy infrastructures is not sufficient to achieve large scale energy access as Hystra & Ashoka underline it. Between 2003 and 2008 despite $23billion spent by the World Bank only 100m fewer people lack electricity[4].

Therefore new models need to be invented, either in terms of cooperation between actors or in terms of innovation driven by local actors. The UN provides a good example of what an increased cooperation might look like in the future with the pro-poor public–private partnership (5P) model. Its objective is to "*increase access of the poor to basic services by promoting inclusive partnerships between local government, businesses, community groups, nongovernment organizations, faith-based organizations, and others*"[1]. One example of successful PPP is the IBEKA's micro hydro project in Cinta Mekar, Indonesia. Based on a local actor's (IBEKA) initiative to develop community-based access to energy programs, public actors, private actors and communities have built an efficient coalition to finance the 120 kw facility required for the project.



Access to energy main actors and funds transactions.[3]

- Why do private actors like social entrepreneurs represent great hope?

As shown in the previous example, **private actors such as social entrepreneurs, NGOs or cooperatives can play a greater role** in providing efficient, innovative and local solutions to answer energy access challenges. The literature provides many examples of private initiatives changing lives of millions of people while developing new solutions improving access to energy.

The IEA sets the development of private sector among its 5 priorities to achieve modern energy. Local self-sustaining and replicable solutions have to be encouraged by traditional actors like governments of multilateral or bi-lateral institutions[5].

Although this type of projects can bring local solutions to local challenges for local impacts, they can also be hindered by many obstacles. How to get financed in the first years before reaching a

sustainable model? How to make product and services affordable for the poor population? How to replicate a solution from one place to another?

Facing these challenges, private actors need support from traditional actors in various ways: setting rules and conditions for the development of private actors, provide funding in loans or equity, developing methods and tools to assess the projects efficiency. The ADB for instance created a specific program called Energy for All dedicated to *"supporting and mentoring young businesses that are focused on creating viable business models for energy access"*[2].

b. CONTEXT IN SOUTH EAST ASIA

	Share of people without access to electricity	Share of people relying on traditional use of biomass for cooking
World	**19%** (1.317m people)[5]	**39%** (2.662m people) [5]
Developing Asia	**19%** (675m people) [5]	**54%** (1.921m people)[5]

Access to modern energy is generally low in Southeast Asia compared to most other parts of the world.

Important progress has been accomplished over the past few years in terms of access to electricity in Asia thanks to ambitious national programs conducted by governments in different countries. Among the leading countries which have known the highest growth rates on electricity access from 2000 to 2009 are: China, the Lao PDR, the Philippines, Thailand and Vietnam[1]. However the level of services and the quality of grid connection may remain low in some areas despite high electrification rates – especially in rural areas. As a consequence, the IEA stresses the importance of off-grid programs which will represent the great bulk of investments required in the coming years in South East Asia[5].

On the access to clean and safe means of cooking important progress still needs to be done as Asia accounts for almost 2/3 of the total investments required to reach universal access by 2030 – especially in China and India[1].

Of course situations remain extremely different from one country to one another.

- **Singapore**

Among all the countries in South-East Asia, Singapore has a very peculiar place with an electrification rate at 100% and 100% of the population having access to clean and safe means of cooking. The main current challenges are to improve energy efficiency (reduce intensity by 20% by 2020) and to strengthen the green economy (5% of peak electricity demand supplied from renewable by 2020)[7].

- **Indonesia**

- **Share of people without access to electricity = 35.5%** (68% in rural areas / 6% in urban areas) [6]
- **Share of people relying on traditional use of biomass for cooking = 55%** [6]

The government launched a series of rural electrification programs through its National Energy Policy which aims to provide access to electricity for 99% of the population by 2020. Indonesia also recently set a target for clean cooking facilities, with a plan to increase the share of households using natural gas or LPG for cooking to 85% by 2015 from only 45% today[7].

The programs rely on large amount of subsidies provided by the State-owned power utility (PNL). Important progress has been accomplished in recent years but Indonesia still accounts for half of the population lacking access to energy in South East Asia – in absolute value. That reflects the difficulty to reach remote areas in the world's most populated archipelago.

- **Cambodia**

- **Share of people without access to electricity = 76%** (87,5% in rural areas / 44% in urban areas) [1]
- **Share of people relying on traditional use of biomass for cooking = 88%** [6]

The government set the objective to reach 70% of electrification by 2030. To reach its objective, it has created in 2004 the Cambodian Rural Electrification Fund providing grant assistance for the development of solar home systems, and micro / mini hydropower.

Cambodia is one of the countries in the zone where much effort has been put on clean cooking means. The ADB and the Global Alliance for Clean Cook stoves supported by the UN have contributed to the distribution of over one million improved cook stoves since 2003.

- **Thailand**

- **Share of people without access to electricity = 0,7%** [1]
- **Share of people relying on traditional use of biomass for cooking = 26%** [6]

Thailand scores among the best countries in the zone in terms of access to energy for all. This situation is mostly due to the ambitious National Plan for Thailand Accelerated Rural Electrification set in 1973 by the government. Today the objectives set focus on energy efficiency - reduce energy intensity by 25% by 2030, compared to 2005 levels- and on increased renewable sources in the energy mix (to 25% by 2021) [6].

- **Myanmar**

- **Share of people without access to electricity = 87%** [1]
- **Share of people relying on traditional use of biomass for cooking = 95%** [1]

The International Energy Agency has calculated that Myanmar has the poorest level of energy access in all of the Asia-Pacific. Even though, since 2008, the production of electricity has jumped very quickly, Myanmar remains a biomass-energy centred economy, with wood alone accounting for 70 percent of all primary energy supply in 2009. This dependence on solid fuels is largely due to the fact that 65 percent of country's population lives in rural areas. Despite such high reliance on biomass, the oil and gas, power, and mining sectors are backbones of the national economy.

- **Vietnam**

- **Share of people without access to electricity = 2%** [6]
- **Share of people relying on traditional use of biomass for cooking = 56%** [6]

With Thailand, Vietnam is one of the best practices in terms of electrification progress in the past 30 years. It increased its electricity access rate from an estimated 80% in 2002 to 98% in 2011. The government planned an important rural electrification program focusing on hydropower and on investing in reliable public infrastructures. It nevertheless has difficulties to face a growing demand. The key challenge in Vietnam is that the subsidized low price of electricity makes private investment in this sector very difficult. Another key issue is the energy efficiency of the new buildings with air conditioning, which environmental impact should, according to the law, be certified, but in reality is not because of lack of controls.

- **Laos**

- **Share of people without access to electricity = 45%** (58% in rural areas / 12% in urban areas) [1]
- **Share of people relying on traditional use of biomass for cooking = 65%** [6]

The National Growth and Poverty Eradication Strategy (2006–2010) made a priority out of rural electrification and reached 45% of access to energy versus 16% only in 1995. The objective is now to reach 90% by 2020.

The program launched is very comprehensive (capacity building, complementary role of public and private sectors, pricing incentive mechanisms) and both grid and off-grid solutions were used to expand coverage to the maximum number of people as possible. Moreover an important focus was set on affordability for the poorest through interest –free-loans to pay for upfront cost of connection[1].

- **The Philippines**

- **Share of people without access to electricity = 14%** (35% in rural areas / 3% in urban areas) [1]
- **Share of people relying on traditional use of biomass for cooking = 50%** [6]

This high rate of electrification comes from the aggressive National Electrification Act passed in 1969 that entrusted efforts to rural electric cooperatives and involved local communities as key elements of electrification prioritizing renewable energy sources.

Large amounts of public funding were provided in the 1970's when 120 cooperatives served more than one million customers. However that decentralized strategy show strong limitations as only 18.8% operate at a profit and are financially viable [1]. The objective is now to reach 90% of electrification by 2020.

3. ORGANIZATIONS INTERVIEWED BETWEEN NOVEMBER 2014 AND JUNE 2015

Category	Organization	Key actions	Contact location	Geographical scope
Public institutions	World Bank-PPP team	The World Bank's Public Private Partnerships (PPP) team is working together with South East Asian countries' Governments to define PPP's plans, policies and processes in hardcore infrastructures (ex: current project with ASEAN on connectivity and transportation).	Singapore	South East Asia
Public institutions	Agence Française de Développement	AFD provides funding to the Government for large energy infrastructure projects in Indonesia. The projects supported by the agency allow the provision of additional energy to the existing grid rather than working on access to energy in remote areas.	Jakarta	Indonesia
Public institutions	CTI-PFAN Asia (Private Financing Advisory Network)	The Climate Technology Initiative Private Financing Advisory Network (CTI PFAN) is a multilateral public-private partnership that nurtures innovative clean and renewable energy projects by bridging the gap between investors and clean energy entrepreneurs. Its goal is to mobilize $1 billion in clean energy investment by 2018.	Bangkok & Manila	South East Asia
Public institutions	SWITCH ASIA – Meet Bis programme	The goal of Meet Bis programme (2010-2014) was to mainstream Energy Efficiency in Vietnam through business innovation support. They wanted to ensure that suppliers of technologies enhancing energy efficiency meet Vietnamese SMEs and provide them with packages that are affordable and easy to implement. This project was funded by EU SWITCH-Asia program.	Ho Chi Minh	Vietnam
Public institutions	Asian Development Bank	The Asian Development Bank is a development agency which hosts the Sustainable Energy 4 All Initiative in Asia. The Regional Sustainable Development Department which is part of this initiative is in charge of identifying promising energy entrepreneurs; connecting them to relevant field experts and helping them raise funds.	Manila	Philippines

MNC	Schneider Electric	BipBop programme focuses on • Business: the Schneider Electric Energy Access (SEEA) Fund aims at supporting SMEs in the development of access to electricity; • Innovation: in collaboration with local partners development of solutions and business models for rural electrification or for individuals; • People: training on energy management related skills and entrepreneurship.	Paris, Delhi, Bangkok, Yangon, Ho Chi Minh	Indonesia, Thailand, Cambodia, Myanmar, Vietnam, Philippines
MNC	Total	Total Access to Energy program focuses on the distribution of solar lamps in developing countries through: • Total's gas stations networks; • Partnerships with local distributing actors. The most developed program is the Myanmar one which is supposed to reach breakeven by 2017.	Singapore Yangon	Indonesia, Cambodia, Myanmar, Philippines
MNC	Danone	Through the Ecosystem Fund, Danone has developed innovative programs of stakeholders' inclusion : • 1 on distribution for healthier nutrition for children • 2 focusing on suppliers reinforcement (milk farmers)	Jakarta	Indonesia
MNC	Grameen Veolia Water	Grameen Veolia Water operates in rural villages of Bangladesh to provide a safe access to clean water to poor households who usually rely on unfiltered water. The project relies on a partnership between Veolia Water and Grameen Health Care Services a social business initiative working to address health issues for the poor in Bangladesh.	Paris, Dhaka	Bangladesh
MNC	Lafarge	Lafarge Indonesia operates a cement plant in Aceh (North Sumatra) and has built its own coal power plant because of • Lack of reliable energy from national grid. • Soaring prices of energy provided by diesel powered plants. The company also started the Rumakhu program of affordable housing.	Jakarta	Indonesia

Network	Social Innovation Park	SIP's mission revolves around the 3 'E's - to Educate, Empower and Enhance. SIP Educates the people, public and private sectors on the principles of social entrepreneurship and innovation. It empowers social entrepreneurs and innovators with a shared resource pool and enhances such set-ups by leveraging on the power of both local and international networks to provide access to resources, cutting edge business ideas and best practices.	Singapore	Singapore, Indonesia, China, Japan, Yale
Network	Ashoka	Ashoka promotes social entrepreneurship by selecting and supporting the most innovative projects with lasting impacts. • Ashoka Singapore acts as a hub for the region more than a local network of entrepreneurs. • Indonesia is the 2nd largest network after India (180 fellows). • Ashoka has a very solid group of fellows (105) that they follow on the very long term (some for the last 20 years).	Singapore, Jakarta, Bangkok	Singapore, Indonesia, Thailand
Network	Impact Hub	The Impact Hub is a shared-services center where entrepreneurs have access to mentors, offices, networks, corporate companies, business angels… In Singapore the Hub gathers 500+ contacts.	Singapore	Singapore
Network	Ma.D	Ma.D is the first co-working space in Bangkok for social entrepreneurs.	Bangkok	Thailand
Network	GLab	GLab supports the Global Studies and Social Entrepreneurship (GSSE) program of Thammasat University, co-creates social impact projects, and develops skill training workshops.	Bangkok	Thailand
Network	Thai Social Enterprise Office (TSEO)	TSEO is a public agency which priority is to stimulate cooperation among social enterprises and develop their networks in Thailand. In addition, TSEO was designed to be in touch with all possible entrepreneurs who have a particular interest in social and environmental issues, and to inspire social responsibility	Bangkok	Thailand

Network + Impact investor	ChangeFusion	ChangeFusion is a non-profit institute under the Thai Rural Reconstruction Movement Foundation under the Royal Patronage. It supports and invests into social enterprises. It also facilitates a better ecosystem for them in Thailand and in Asia.	Bangkok	Thailand
Network	Spark	Spark is a non-profit incubator based in Hanoï. It provides seed funding and capacity building for small social enterprises in Vietnam. Since 2010, 21 projects have been supported by Spark.	Hanoi	Vietnam
Impact Investors	LGT Venture Philanthropy	LGT Venture Philanthropy provides a wide range of services for early-stage businesses in development (equity, loans, incubation, mentoring…). It supports projects in Education, Agriculture, Health, Renewable Energy & ICT.	Jakarta	Indonesia
Social business	Nusantara Development Initiative	NDI aims at ending energy poverty through women empowerment in rural Indonesia. It distributes solar lamps to women and trains them on how to sell them.	Jakarta, Singapore	Indonesia
Social business	Ibeka	IBEKA works in partnership with communities to develop off-grid hydro schemes that stay in use (public ones are often abandoned because of the lack of funds to maintain them). Through long-term involvement IBEKA makes sure that the community has the skills to manage and maintain the scheme, and ensures community ownership which brings a continuing source of income.	Jakarta	Indonesia
Social business	Azzura Solar	Azzura Solar distributes and installs Solar Power Light Kits for individual's houses. Besides the business activities a 100% non-profit program has been settled (Bright Future) to distribute solar lamps to people with no access to energy. The model relies exclusively on individual or corporate donations.	Jakarta	Indonesia
Social business	Kopernik	Kopernik provides technology based solutions for the last mile especially on energy. Donors fund the technologies' upfront costs and poor households can buy products in local retailers. Kopernik acts as a multi-products distributor whose main strength is to establish relevant and efficient distribution channels.	Ubud	Worldwide with a focus on Indonesia

Social business	Entrepreneurs du Monde	Entrepreneurs du Monde manages a program to facilitate access to clean and affordable energy for all in Cambodia.	Phnom Penh	Cambodia
Social business	GERES	GERES is specialized in the implementation of efficient energy solutions adapted to developing countries. In Cambodia, GERES now works on 2 main programs and related projects: • Improved Cookstoves (ICS) • Integrated Sustainable Biomass Supply (ISBS) It also incubates social enterprises.	Phnom Penh Yangon	Cambodia Myanmar
Social business	SNV	SNV is a Dutch NGO operating in various countries of the world and focusing on 3 sectors: agriculture, water and renewable energy. We focus here on the Solar Microfinance Programme they coordinate in Cambodia and the Biogas Digesters Programme they manage in Vietnam.	Phnom Penh Hanoi	Cambodia Vietnam
Social business	NRG Solutions	NRG Solutions was founded with the mission to empower people with renewable energy. They want to deliver affordable, accessible solutions that match people's needs on a case-by-case basis, supported with reliable service and support.	Phnom Penh	Cambodia
Social business	SunSawang	SunSawang's mission is to make solar electricity sustainable and economically accessible to rural Thailand. They provide high quality solar products and services for rural areas in Thailand. They hire and train local technicians to maintain this equipment, and help villagers pay for these over five years in small affordable installments.	Mae Sot	Thailand
Social business	Proximity Designs	Proximity Designs is one of the largest social enterprises in Myanmar. It was created in 2008 after a violent typhoon to provide new models of affordable water pumps to local farmers. It soon diversified with access to finance and access to energy services.	Yangon	Myanmar

Social business	Mercy Corps	Mercy Corps is a US-based charity created in 1979 focusing on emergency situations like a natural disaster, an economy's collapse or a conflict eruption. It provides emergency relief and supports initiatives that are community-led and market-driven. In Myanmar 90% of the programs are dedicated to agricultural development and 10% to energy with an efficient cook stove initiative.	Yangon	Myanmar
Social business	IECD	IECD is a French NGO mainly active in vocational trainings and support to small entrepreneurs in emerging countries. • It has been created in 2010 in Vietnam with the objective to bring in-depth operational support to micro-entrepreneurs in HCMC • A feasibility study is being conducted to train 350 electricians in partnership with Schneider Electric	Paris Ho Chi Minh	Vietnam
Social business	3S - LP4Y	The Solar Service Station – "3S" – was created in June 2012 by the NGO LP4Y and with the technical support of Sunpower and the TNK Foundation. It is one of the NGO's entrepreneurial development centers in which they teach professional skills to disadvantaged young adults. The station's goal is both to provide jobs to young mums from the slum and to provide cheap access to light to poor families.	Manila	Philippines
Social business	Hybrid Social Solution	Hybrid Social Solutions was created in 2010 to provide Filipinos with affordable energy products. HSSI provides different types of energy products to rural communities in the Philippines in partnership with local distributing partners.	Manila	Philippines
Social business	One Renewable Energy	One Renewable Energy Enterprise is a social business which provides affordable energy for rural low-income households, and renewable energy solutions for larger projects. It relies on an hybrid income-generating model: • A commercial activity in large cities • A social branch in rural areas benefiting from the commercial benefits	Manila	Philippines

4. ANALYSIS AND KEY LEARNINGS

The public-private gap

The notion of access to energy is definitely linked to the grid extension and national electrification rates but also to the reliability of **the connection and to the quality of service**. That explains why some access to energy programs also concern already connected areas. Some countries like the Philippines show high electricity coverage rates but the quality and stability of supply are highly unpredictable.

Electrification is highly correlated to the **quality of the public infrastructures and the State's efficiency.**

- In Indonesia, where the State is very strong but not well organized, there is an extended grid but it does not provide enough power for the demand and it does not reach the most rural areas.
- In Cambodia, the State is working on electrification plans but because of the lack of public funds, it will take many years before it is completed.
- In Thailand, the electricity production and distribution are managed by State owned companies and seem to work well. Only a small part of the population living on remote islands or in the mountains in the North of the country are still not connected to the grid.
- In Vietnam, the State has declared access to electricity a basic right for the population and has conducted huge efforts in 1970's in terms of grid extension resulting in a 98% coverage rate.
- In Myanmar, the State has not yet put much effort in developing and expanding the electricity network and the country still lags behind in terms of coverage rate in Asia.
- In the Philippines, the State has handed over the responsibility of electricity distribution to giant private energy companies which do not go to remote areas because of low profitability perspectives.

Beyond electrification, the State is also a critical actor on the energy market at large through its responsibility in **defining the energy market's tax and regulatory framework or through its direct intervention in the market.**

- In Indonesia for instance, important public subsidies to fossil energy have been a strong deterrent to investments in renewable energies.
- In Cambodia, because of lack of funding, the State has delegated the distribution of electricity in remote areas to small private ventures.
- In Vietnam, the private market of access to energy is almost inexistent since the State considers that energy is a critical public service.
- In Myanmar and in the Philippines, State programs that distribute solar material for free before local elections are very strong disruptive factors for the emergence of an efficient energy market.

It is key to highlight that national and international public actors focus on infrastructure projects while private actors focus on local access to energy systems and that, therefore, **there is very few interactions between the two**.

- On the one hand, all the private actors that we met told us that they want to stay away from the Government in order to protect their efficiency.

- On the other hand, the main public or international actors we met told us their focus is not on supporting the development of private actors offering alternative energy solutions.

However, the actions of these 2 categories of actors have an impact on one another and the frontier is being blurred:

- Across the region, several State or development agencies programs on access to energy as well as large corporate CSR programs distribute solar items for free without studying the precise needs of the population. It results in a strong market distortion with people getting used to low-quality products with no maintenance services. As long as the "*flight to quality*" does not occur, private actors willing to build the local market will still be directly harmed by these practices.

- The Asian Development Bank's programs traditionally have an indirect impact on small entrepreneurs as the ADB usually supports intermediaries such as banks or micro-credit institutions, which will themselves, finance small enterprises. But recently, the ADB started to engage directly with small entrepreneurs, providing them with expertise and funding through a dedicated internal department. Other development agencies such as the World Bank start to emphasize the role of small entrepreneurs in reaching access to energy and also consider intervening directly.

At the end of the day, State's involvement on access to energy is critical to reach scale. Private companies may represent a solution under certain conditions but only with a limited impact since:

- Social entrepreneurs' impact will still be limited to several communities only
- Large private companies do not invest in bringing energy to remote and less profitable areas

The specificity of clean and safe means of cooking

In South East Asia, situations highly differ from one country to another in terms of access to electricity. However, getting access to clean and safe means of cooking is still a common issue across the region. Even in countries with high electricity coverage rates, the number of people still relying on biomass for cooking is incredibly high. Vietnam for instance reached 98% electricity coverage but 56% of the population still cook with traditional biomass cook stoves. Several factors can explain that situation:

- It is much harder for the State to intervene directly and change the cooking practises of the population,
- The extension of grid electricity in uncovered areas generally does not impact the way people cook at least in a medium term. People do not switch from traditional biomass stove to electric hob,
- Adoption of new ways of cooking is a long process since people have learned to cook traditional recipes with biomass cook stoves for generations,

The big challenge ahead for South-East Asian countries consists in improving the ways people cook by introducing slight changes throughout the value chain rather than technology breakthrough innovations that people won't necessarily adopt. Geres' extensive work in Cambodia attests that this way of operating is very efficient.

Local culture does matter

The ecosystem is very different from a country to another as it is shaped by cultural, political, geographical, historical and economic factors. In Indonesia, people usually give to religious charities - which explain for example that the biggest foundation is a Muslim foundation, Dompet Dhuafa, and that Ashoka has difficulties to implement its model – Ashoka Indonesia does not have any Ashoka Support Network for instance. The country's geography (thousands of islands) leads to a strong decentralized political power giving much importance to local Governments and the communities.

4 main categories of private-led initiatives

Most of the projects launched by private actors in the energy sector concern access to efficient energy and to clean and safe means of cooking. We identified 4 different categories:

- **Off-grid projects:** providing small devices to remote communities which do not have any grid access.
- **Mini-grid projects**: providing home-based devices like solar systems to one or several household.
- **Community grid projects**: create a local grid operated and maintained by the community itself.
- **Efficient and clean means of cooking**: providing improved cook stoves.

Almost all these solutions we explored or read about operate with hybrid business models, with a mix of for-profit and philanthropy. No one-size-fits-all solution seems to exist according to the actors we met and none of them operates a 100% for-profit and poor people-oriented project. The efficient solutions are those that are developed at local level and the economies of scale are still pretty hard to reach. Based on the first interviews we conducted, we could draw this first key success factors list for efficient private led projects.

Key success & scale up factors for successful BOP programs

- **Listen!** Several companies or development agencies have fallen into the trap of providing poor people with theoretically brilliant solutions but not adapted to local needs or habits. The literature offers plenty of examples of well-thought programs that never reached their initial targets. The first thing to do before launching any BOP program is to make an in-depth context and needs analysis. What are the practical problems people are facing? How do they feel about it? What do they want? That may require extensive field presence or a trusted local third party but it is the first inescapable step.

"It took us time to change the way to tackle the problem and to focus on what people want rather on what we think people need."

Benoit RINGO.T Veolia Water.
On the Grammen Veolia Water access to water program in Bangladesh.

- **Setting up the target:** BOP consumers are not uniform. They can be divided in categories depending on their levels of earnings, geographic split, habits… The project needs to make sure it focuses on the correct target depending on its ambition and on its business model.

- **The right offer:** the offered product or service has to answer a need that the community has expressed and for which it is ready to pay. This means that the program needs to be based on a very strict needs assessment and that a clear and brave decision has to be made if the survey shows that the community is not fully convinced by the product or the service. People will only pay for a product if they not only need it but they also want it. Do not imagine what people may need, ask them what they want!

"People will pay for energy services, just not for unreliability or unpredictability; they won't pay for electricity that is on when they don't need it or off when they do need it. Nor will they pay for electricity that has such erratic fluctuations in voltage that it fries appliances—that's what they don't want to pay for. But reliable, efficient service—yes, they want that."

Village leader quote.
ADB (2013). Energy Access and Energy Security in Asia and the Pacific. ADB, Manila.

- **Appealing marketing**: poor people do not want poor marketing. They will never consider themselves as poor and always look at poorer people than themselves. The way to advertise the product / solution should be as attractive as it would be for rich customers. Educative marketing often fails to meet its target whereas inspirational campaigns may be an efficient way to promote even non-sexy products (access to water, access to electricity). Displaying sign of access to energy in a poor community is often a very strong social signal and marketing could take that in consideration.

- **Efficient distribution network**: the most successful programs are those which are relying on existing distribution networks and do not re-create new distribution channels from scratch.

- **Payment by instalments**: people are willing to pay to get a good product (NDI -a solar lamp that will last for example) or a good service (IBEKA-electricity in their village with a hydro power plant that is maintained) but they can't pay upfront. It is critical to offer payment by instalments.

- **Legitimacy and trust**: partner with local actors that are respected by the local authorities (Government and/or communities) and that can manage the long term micro payments. Micro-finance institutions are often used as Trojan horses to penetrate new markets. They can easily offer new products / services to their portfolio of clients and make sure these clients will trust them. However it is necessary to define very clearly the expectations towards such a partner and make sure he is in a position to fulfil its role.

- **Prescription** plays a key role in the diffusion of a new product / service. The power of word of mouth should not be neglected. Successful projects identify opinion leaders and micro-prescribers and make sure they will be the first to use and recommend the product. Understanding the local complexity of social relations within the communities is essential to be able to build trust and to develop prescription. That can be achieved through point #1 "Listen!" and through an in-depth local immersion.

- **Maintenance / Follow-up:** once a product or service has been distributed it is absolutely key to follow up on the use and satisfaction rates and to provide an appropriate warranty service if necessary. Bad buzz can go much faster than good buzz especially in remote communities! In solar for instance most of the products problems are due to users' misunderstanding or misuse of the device. A qualified local presence to answer people' questions and help them properly use the product / service is essential to build the company's reputation.

- **Step-back:** third parties can be of great help to step-back from the business day-to-day operations and help the entrepreneur get a better understanding of its activities successes and failures. Third parties with different background and skills like anthropologists are even more relevant to do so.

- **Empowerment:** offering the right product through the relevant distribution channel necessarily involves local actors who need to be trained (accounting, sales…) and who have to feel responsible for the success of the program.

- **Keep testing the business model**: most private companies and social entrepreneurs dealing with BOP markets do not manage to reach profitability in the short-run. The time to build the ecosystem and set-up a stepping stone for operating profitable activities is long and costly. Keeping the business model flexible with mixed streams revenues is a way to gain time (donations, premium for-profit services…)

"We use the commercial branch to feed the social one. We soon discovered that this cross-subsidy model is necessary in our field of activities if we want to operate independently."

Erel NARIDA. Founder of One Renewable Energy Enterprise in the Philippines.
On his two-tier (commercial & social) business model

- **Wording matters**: the expression social entrepreneur is fashionable in many countries and pretty clearly understood by people interested in those topics. In some countries a "social entrepreneur" can have very different interpretations. In the Philippines a social entrepreneur would be an entrepreneur eager to go to public events, meet with people and *socialize*. Make sure you name the project with the right local context understanding.

Time and resources on the ground are essential to reach these success factors. They are thus the two major obstacles to scale up.