

# ENERGY FOR ALL



Asia Clean Energy Forum  
Energy Access Track - June 17, 2015

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# ENERGY ACCESS SITUATION IN ASIA-PACIFIC



**4.2 Billion**  
Population in Asia



**1.8 Billion**  
People without access to  
clean cooking



**615 Million**  
People without  
access to electricity

## Energy for All Initiative established 2008

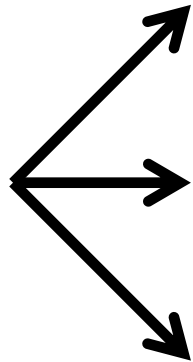
- **INTERNAL goal:** Increase ADB's investment in energy access projects and enterprises to scale up access to affordable, modern and clean energy among the regions poor using renewable energy technologies
- **EXTERNAL goal:** Develop strategic partnerships and alliances with other stakeholders
  - With the target of providing energy access to 100 million people by 2015, the Energy for All Partnership was created in 2009 to address energy poverty at the regional scale

# TRACKING OF OUTPUTS

## ACCOMPLISHMENTS IN ENERGY ACCESS 2014

**\$400**  
**Million**

Energy Access  
Investment In 2014



New connections to electricity for **1.62 million households**



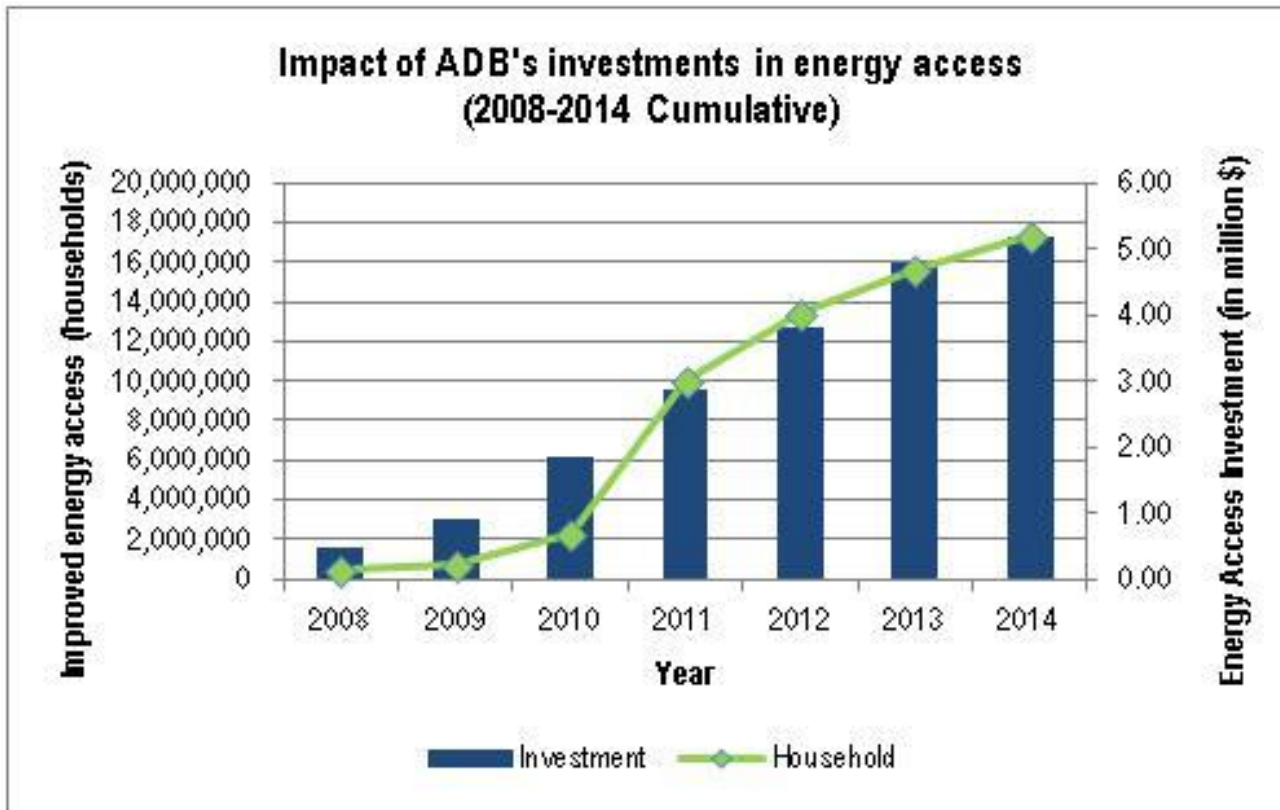
Improved electricity service to about **600,000 households**



The switchover of **270,000 households** to improved cookstoves

# TRACKING OF OUTPUTS

## ACCOMPLISHMENTS IN ENERGY ACCESS 2008-2014



**USD 5.2 billion**

Total ADB investment  
in energy access  
(2008-2014)

**86.4 million**

Number of people  
who will benefit from  
ADB's energy  
access investments

The Partnership was created in 2009 to address energy poverty at the regional scale

**TARGET:** Provide energy access to 100 million people in Asia Pacific by 2015

**99% of target achieved!**



Implemented by



World Business Council for Sustainable Development



한국풍력산업협회  
KWEIA Korea Wind Energy Industry Association



renewable energy & energy efficiency partnership



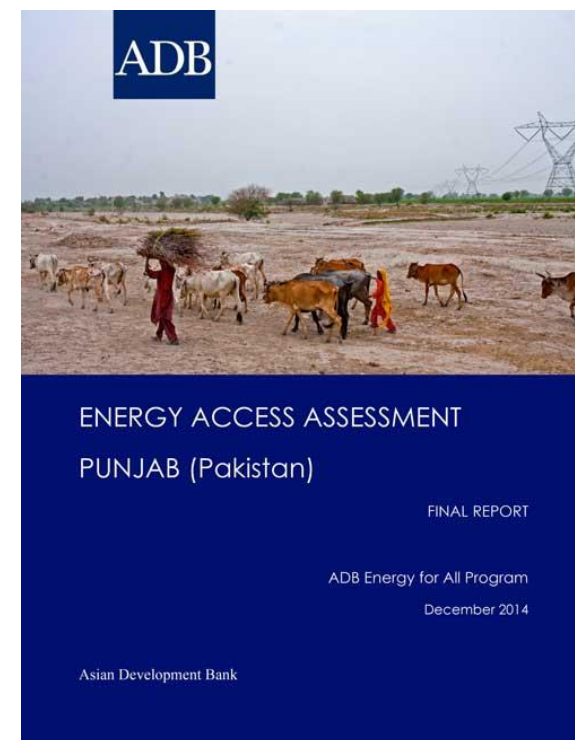
WORLD LPG GAS ASSOCIATION  
WWW.WORLDPGAS.COM



Global Sustainable Electricity Partnership

## Punjab Energy Assessment Report

- Overview on Pakistan' Energy Sector's Regulatory Framework
- Lessons learned from other energy access programs
- Proposes financing and delivery models
- Proposes pilot projects:
  - Biogas powered mini-grid
  - PV-solar mini-grid
  - Low head micro hydro distributed generation
  - PV-solar powered tubewell
- Involvement of private sector for implementation of pilot projects
- Report was prepared to assess potential pilot projects and scale up through ADB's operations department



LINK: <http://www.energyforall.info/wp-content/uploads/2012/07/Punjab-Energy-Access-Assessment-Report-Final.pdf>

### FEASIBILITY STUDY: Hybridizing Existing Diesel Power Plants

- Collaboration with NEA and KEMCO
- 5 sites in remote islands in the Philippines
- Designing of least cost renewable energy option
- Hybridization of existing diesel mini-grids with renewables to
  - increase efficiency
  - increase reliability
  - reduce fuel costs
- Proof of financial viability
- Business model for replication through electric cooperatives/ other private investors and potential scale up through ADB

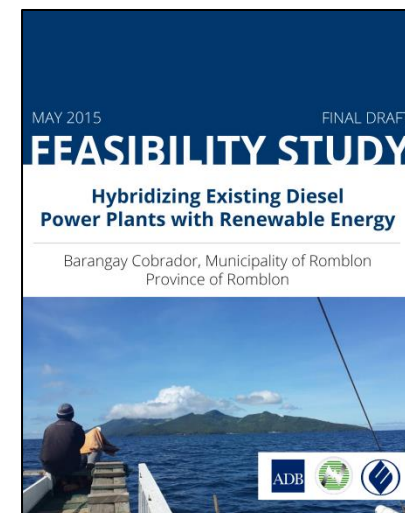
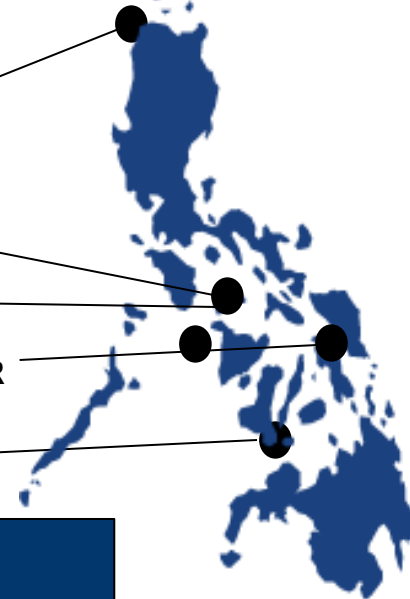
SABTANG, BATANES

COBRADOR, ROMBLON

LOGBON, ROMBLON

STO. NINO, WESTERN SAMAR

BANTAYAN ISLAND, CEBU



### PILOT PROJECT: Cobrador, Romblon

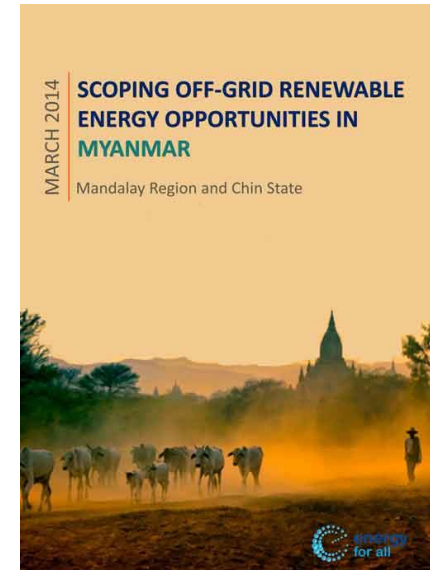
- Collaboration with NEA, KEMCO and Romblon Electric Cooperative
- Setting up of 30kW solar PV plant and hybridization with existing diesel gensets
- Incorporation of Lithium-ion batteries
- Extension of power supply from 8h to 24h per day
- Connection of additional households
- More power for productive uses & income generation (e.g. boat making, marble industry, water purification)



### Scoping Report: Off-grid renewable energy opportunities in Myanmar

- Field visit to Mandalay Region & Chin State
- Household & demand surveys
- Proposes solutions & pilot project for Mandalay Region
- Solar Home Systems, Mini-grid, Solar lantern charging stations
- Involvement of private sector for implementation of pilot projects
- Phase 1 for pilot to replicate & scale up through South East Asia department in Phase 2

LINK: <http://www.energyforall.info/wp-content/uploads/2014/08/214577355-Scoping-Off-Grid-Renewable-Energy-Opportunities-in-Myanmar.pdf>



### PILOT PROJECT (under implementation):

- Mandalay Region and Chin State
- Delivery and installation of ~1,000 Solar Home System of 3 sizes (30W, 70W, and 110W)
- Support by ADB through Output Based Aid mechanism
- Varying size of subsidy according to size of installed system
- By early May 2015, around 60% of the units are being delivered and installed
- Mini-grid and solar lantern charging stations under preparation



### PILOT: Solar Mini-grids in Rural Communities

- Installation of 35kW solar power to provide 95kWh of electricity/ day
- Aggregation of 3 dispersed remote villages in Khotang & Okhaldhunga province to one larger project
- 83 households for lighting & electric appliances/ 25 local anchor businesses
- Private sector/ community participation
- Operation & Maintenance: one person residing on-site serving the 3 villages in case of power supply emergencies



### PILOT: Solar Mini-grids in Rural Communities

- Private sector/ community participation



- More power for lighting and electric appliances (83 households) and income generation (25 local anchor businesses)



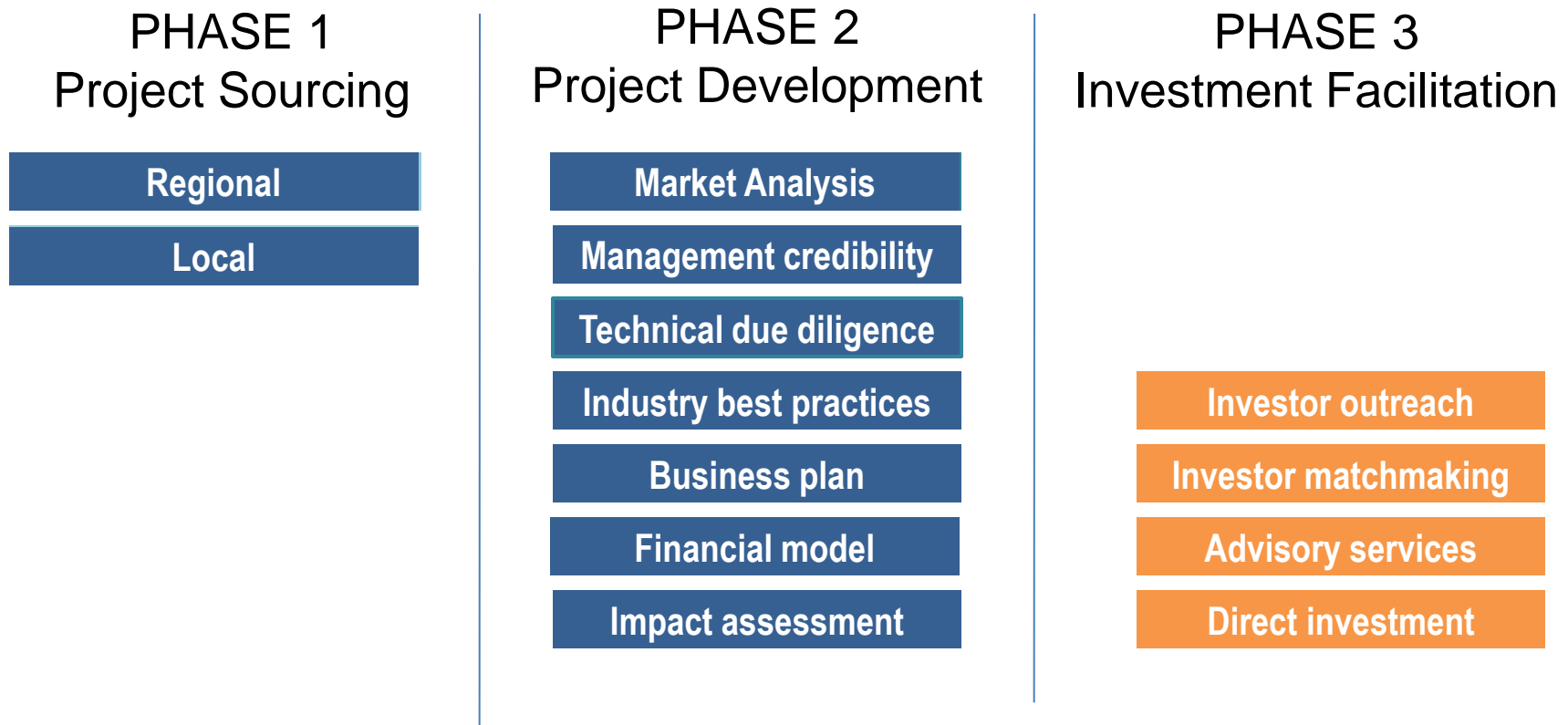
### Project Development Facility (PDF)

- To **increase private sector participation** in delivering modern energy to the poor
- **Offers services to entrepreneurs** like
  - Customized mentoring
  - Credit enhancement
  - Investor matching
- **Offers services to investors** like
  - Investment referrals
  - Due Diligence support
  - Risk Sharing Facility

The PDF incubates business models from start-up to sustainability and helps to refine start-ups into bankable investment opportunities



### Services offered by the PDF





## BUSINESS DEVELOPMENT WORKSHOPS

ADB organizes Business Development Workshops to help entrepreneurs articulate their business model and develop an investment pitch to attract funding for their project.

### **Energy for All Business Development Workshop**

Yangon, Myanmar  
May 2014

Business development workshops have been conducted in countries including Myanmar, India and Indonesia.

# PROJECT DEVELOPMENT FACILITY

PROJECT DEVELOPMENT + INVESTMENT FACILITATION

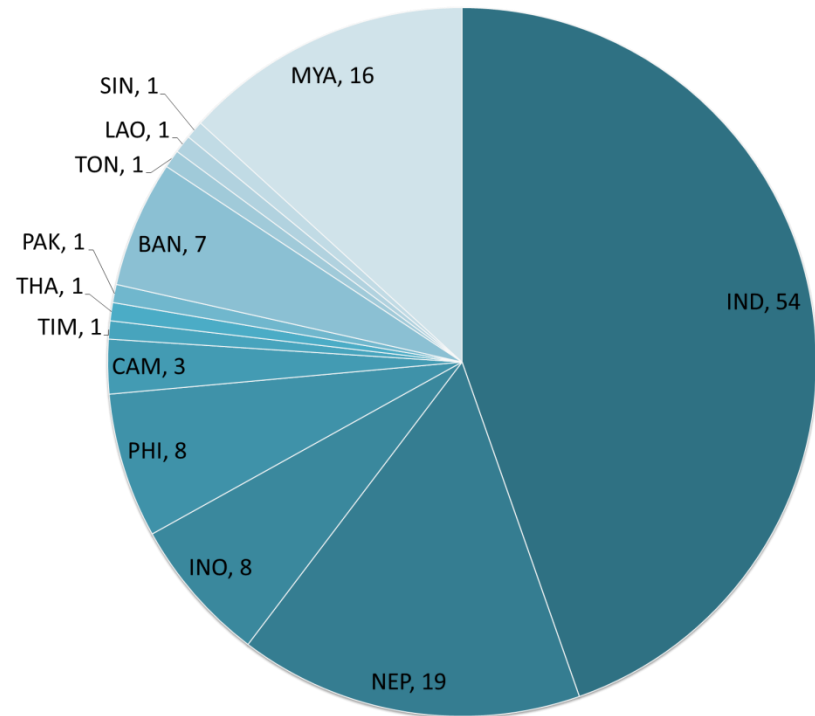
**BUSINESS  
DEVELOPMENT** **65**

**CUSTOMIZED  
MENTORING** **05**

**INVESTMENT  
FACILITATION** **32**

**DEALS  
CLOSED** **10**

**Geographic Distribution of Projects**  
13 countries, 121 projects





# PROJECT DEVELOPMENT FACILITY

## INVESTMENT FACILITATION



### **SIMPA NETWORKS (INDIA)**

**USD 2M Equity Investment**

Simpa utilizes an innovative, pay-as-you-go business model using SMS credits to purchase solar home systems



### **FRONTIER MARKETS (INDIA)**

**USD 150,000 Equity Investment**

Clean energy product provider with a strong after-sales service targeted to low-income households in India



### **ONE RENEWABLE ENERGY ENTERPRISES (PHILIPPINES)**

**USD 50,000 Equity Investment**

Provider of affordable energy to rural low-income households & renewable energy solutions



### **SUN-EEE (CAMBODIA)**

**USD 1M Equity Investment**

Develop renewable energy utilities and implement biomass power plants & solar farms in off-grid areas that are not easily accessible



# PROJECT DEVELOPMENT FACILITY

Collaboration with ADB Private Sector Operations Department

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## Clean Technology Fund (CTF)/ADB: Renewable Energy Mini-grid Fund and Distributed Power Generation Program

- The Program will deploy **USD 30 million** of investment capital over multiple private sector companies and impact funds to scale-up mini-grid investment in India, Indonesia and Philippines
- Co-financing facility with ADB Private Sector Operations Department
- Supported by a **USD 3.5 million** technical assistance advisory program, administered by ADB's Energy for All Initiative
- Investment component includes senior debt, subordinated debt, guarantees and equity investments along ADB investment

## Credit Enhancement Support:

- Collaboration with OIKO Credit India
- ADB is providing technical assistance and a risk-sharing mechanism to **OIKO Credit India** to encourage them to issue working capital loans to energy access companies in India.



### Energy Lending Support:

- Collaboration with Microfinance Council of Philippines (MCPI)
- Technical assistance to 2 microfinance institutions (MFIs)
- Assessment of feasible energy loan products to incorporate in portfolio
- Focus on household and agro-processing appliances



## WORKSHOPS

- Energy for All conducts workshops throughout the year to share its expertise in the energy access space (eg Energy Storage, Business Model, Output-Based Aid, etc.)



**AFCEF-5 (Thailand)**



**WORKSHOP ON OUTPUT  
BASED AID (Thailand)**



**BIOGAS WORKSHOP  
(Bhutan)**



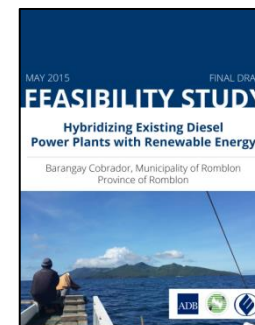
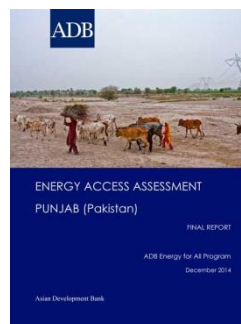
**TECHNICAL STANDARD  
WORKSHOP FOR  
FIBERGLASS BIODIGESTERS  
(Vietnam)**

## REPORTS

- Energy for All has produced a number of reports in 2014, including feasibility studies in small islands in the Philippines and energy access assessment in Pakistan

## FLYERS & BROCHURES

- Energy for All has produced a number of country and thematic flyers to disseminate knowledge and promote E4ALL goals



## TWITTER | @energyforall

- Has 1092 followers and counting
- Reaches an average of 70,000 people in a week



## FACEBOOK | Energy for All Initiative

- Has 533 likes and counting
- Reaches up to 2,000 users per week

## WEBSITE | [www.energyforall.info](http://www.energyforall.info)

- The E4All website is continuously undergoing changes to keep up with the online sphere.
- It features news, events and publications by E4All and partners.

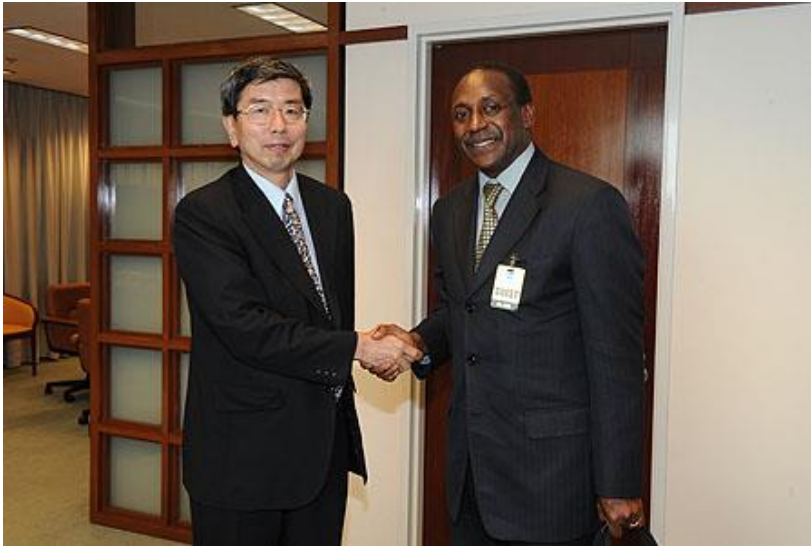


# ACEF 2015 – WEEK AT A GLANCE

SESSION	DATE	TIME
SE4ALL Consultation Workshop	14 June	8:30AM – 5:30PM
DEEP DIVE WORKSHOP – Hybrid Renewable Minigrids: Their Potential for Expanding Energy Access and Reducing Diesel Dependency	15 June	9:00AM – 12:30PM
E4ALL Partnership Steering Committee Meeting	15 June	2:00PM – 5:00PM
DEEP DIVE WORKSHOP - Unlocking Energy Access Impact, Investment, Scale and Sustainability through Gender-Sensitive Approaches	15 June	2:00PM – 5:30PM
SE4ALL Investor Forum	16 June	8:30AM – 5:30PM
<b>ENERGY ACCESS TRACK SESSION - New and Innovative Business Models to Expand Access</b>	<b>17 June</b>	<b>11:00AM – 12:30PM</b>
<b>ENERGY ACCESS TRACK SESSION - Mini-Grids to Expand Access</b>	<b>17 June</b>	<b>2:00 – 3:30PM</b>
<b>ENERGY ACCESS TRACK SESSION – Improved Cooking Solutions</b>	<b>18 June</b>	<b>9:00 – 10:30AM</b>

# SUSTAINABLE ENERGY FOR ALL

## ASIA-PACIFIC REGIONAL HUB



### 3 GOALS OF SE4ALL:



**Universal Energy Access**



**Renewable Energy**



**Energy Efficiency**

ADB, **through Energy for All**, acts as the regional hub for efforts that contribute to the global Sustainable Energy for All Initiative (SE4All), alongside UN agencies and development partners.

# SUSTAINABLE ENERGY FOR ALL

## RECENT ASIA-PACIFIC REGIONAL HUB ACTIVITIES

### Asia-Pacific Regional Hub (AP Hub) was launched last ACEF 2014



- The first **SE4ALL Investor Forum** was held in June 2014 during the Asia Clean Energy Forum in **Manila**.



- In October 2014, an **SE4ALL Investor Forum** was held in **Bangladesh**, co-organized by ADB, World Bank, US Department of State and the Government of Germany.



### Monitoring of SE4ALL Goals in the Asia-Pacific

- The Regional Hub is taking the lead in the publication of the **SE4ALL Status Report** in the Asia-Pacific Region to be released every two years.  
First report: focus on nexus energy-women-children-health
- **SE4ALL Consultation Workshop: Monitoring the Status of Asia-Pacific** on 14 June 2015 to substantiate empirical data, deepen the analyses of the report and to document practices, projects, and synergistic initiatives, specifically highlighting the nexus energy-women-children-health



# SUSTAINABLE ENERGY FOR ALL

## RECENT ASIA-PACIFIC REGIONAL HUB ACTIVITIES

### New Partnerships

- ADB partnered with Sustainable Energy Association of Singapore (SEAS) to establish a **Center for Excellence on Sustainable Energy** (December 2014). The Centre was launched in March 2015
- ADB partnered with IRENA to support the rollout of cost-effective renewables to off-grid rural communities in the Asia-Pacific region (June 2014)



# FOR MORE INFORMATION:

## ADB's Energy for All Website & Social Media

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[www.energyforall.info](http://www.energyforall.info)



Energy For All Partnership



[@energyforall](https://twitter.com/energyforall)



ADB Energy for All



[secretariat@energyforall.info](mailto:secretariat@energyforall.info)

## SE4ALL Website & Social Media

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[www.se4all.org](http://www.se4all.org)



Sustainable Energy for All  
– Asia Pacific



[@SE4All\\_AsiaPac](https://twitter.com/SE4All_AsiaPac)

E-mail: [jacharya@adb.org](mailto:jacharya@adb.org)