LEDS ENERGY WORKING GROUP

REGIONAL PLATFORM LEDS LAC RESILIENT AND LOW EMISSION DEVELOPMENT STRATEGIES

Latin American & Caribbean Bioelectricity Community of Practice

Introductory session 2018

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Agenda

00:00 – 00:30 Introduction

- Welcome, introduction of session agenda
- Self-introduction of session participants including their work on BioE and biogas

00:30 – 00:45 What got us here: Short introduction to the LAC BioE-CoP

- Questions and comments

00:45 – 01:00 Presentation of member survey results

- Questions and comments

01:00 – 01:45 Presentation of suggested 2018 work program

- Overarching focus and approach
- Presentation of suggested individual online sessions and discussion with participants
  - What is good? What is not?
  - What is lacking?
  - How to further finetune the program?
- The in-person workshop
  - Logistics: Date and venue; travel support
  - Initial goals and ideas

01:45 – 02:00 Wrap up & Next Steps

- Summary of discussion
- Logistics for next meetings

Please introduce yourself briefly: name, country, organization, why are you interested in the Community of Practice.

Countries represented in the CoP*

Argentina
Belize
Bolivia
Colombia
Costa Rica
Dominican Republic
El Salvador
Ecuador
Germany
Guatemala
Mexico
Jamaica
United States
Uruguay

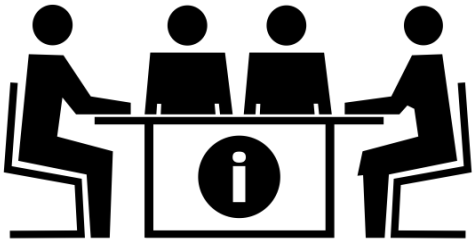
*Registered for the introductory session as of April 26th at 5 pm Costa Rica time

Bioelectricity Community of Practice (BioE CoP)

Energy WG
LEDS GP/LEDS LAC
REAL services
Other partners

Direct technical assistance to countries (Early mover activities)

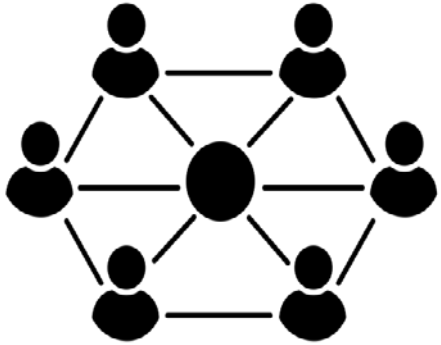
LEDS LAC
Energy WG + practitioners



Group work (Community of practice)

Online and in-person exchange and capacity building sessions

LEDS LAC
+ LEDS GP



Dissemination of knowledge:

Webinars, reports, case studies, sessions in regional and global events

BioE CoP - Background

- Launched in 2016 – first community of practice for LEDS GP and LEDS LAC
- 1st year: 3 online sessions and in-person workshop in Costa Rica, December 2016
- 2nd year: 3 online sessions and in-person meeting, Mexico, October 2017
- 3rd year: 4 online sessions (1 intro and 3 content). In person workshop: Montevideo/Uruguay, 20 August 2017.

2016 – Advancing bioelectricity development

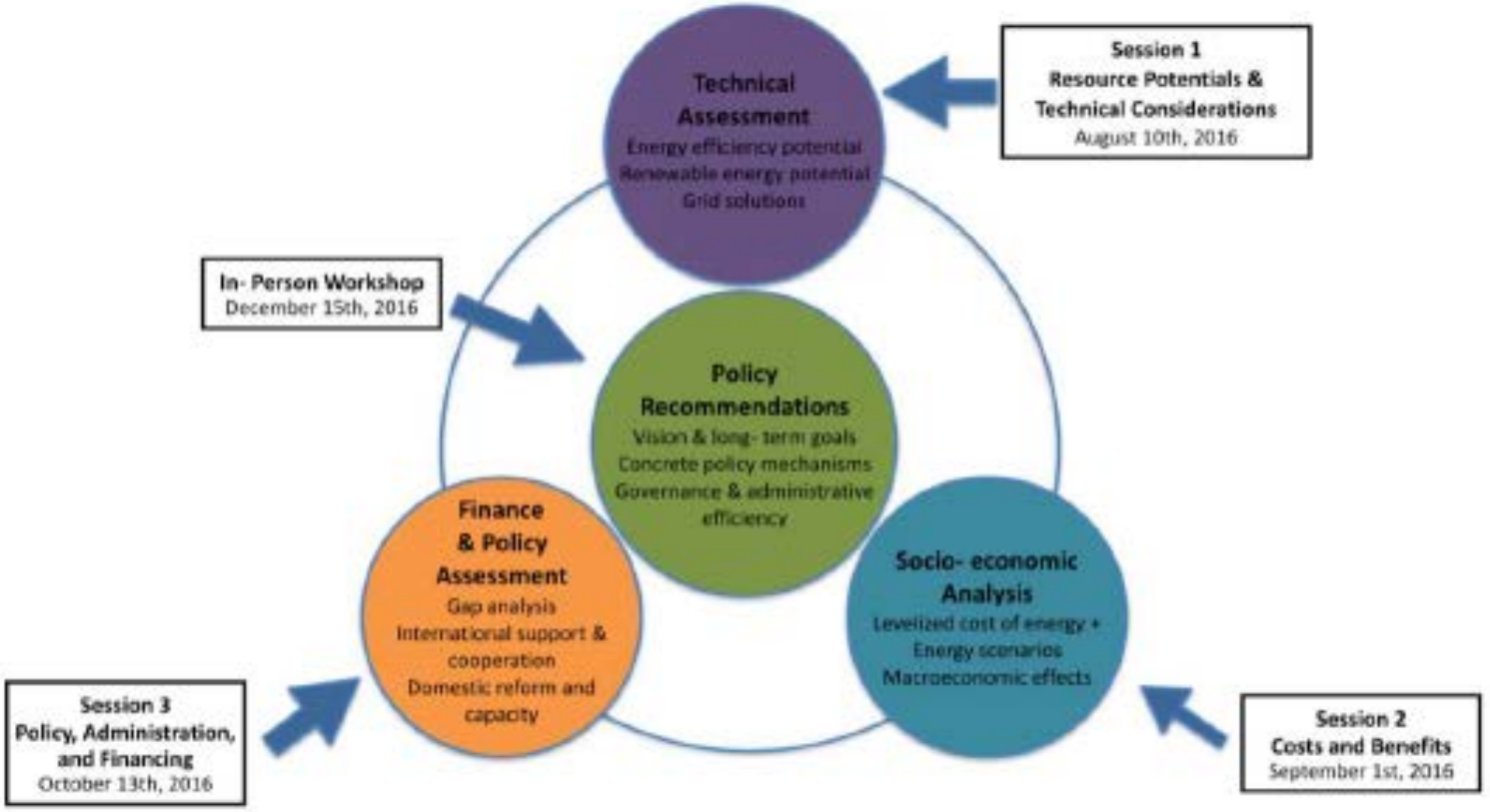


Figure 1: Overview of Community of Practice Proceedings

2017 – De-Risking investments in bioelectricity

Online Session 1. Bioelectricity Investment Risks and De-Risking Measures, Sept. 13

Online Session 2. Addressing biomass feedstock-specific investment risks in bioelectricity project development, Oct. 4

In-person meeting. Oct. 18, Mexico City, in the framework of LEDS LAC´s Sixth Regional Workshop

Online Session 3 | 2017 Summary of Findings & 2018 CoP planning, Dec. 15

2018 – Policy and market environment for sustainable biogas investments

Online session 1. Introduction & discussion of work plan

Online session 2. Rural Biogas: Power to the Farmland!

Online session 3. Urban biogas: Don`t waste your waste!

Online session 4. Farm: Energize your cows and crops!

In-person meeting. Exchange and hands-on work - Business models and financing; enabling policies

2018 Participant survey

- 13 respondents (as of April 26):
  - Bolivia (2), Colombia (1), Costa Rica (3), Dominican Republic (1), El Salvador (1), Guatemala (1) Jamaica (2), Mexico/Denmark (1), Uruguay (1)
  - Government (8), academia/technical institution (2), regional organization (1) private developer (1)
  - Women (3), men (10)

What are your expectations?

Market & finance challenges

- Ultimate goal needs to be to ensure a sustained market that strengthens the commercial supply of biomass

- In on-grid settings, bioelectricity is not yet price-competitive with other energy sources
  - Requires incentives and mechanisms to reduce risks for often large investments required.
  - Requires financing tailored to the specific needs of this projects (longer paybacks, etc.)

- To develop a sustainable biogas market and facilitate access to renewable energy for micro-, small- and medium-size agricultural producers and rural households, for both productive and domestic use., we need to first create awareness and stimulate demand about the potential of biogas as an alternative energy solution
  - This includes a gender perspective.

- Main challenge is related to the assessment of environmental externalities of biogas

- A key problem is the cleaning and compression of the gas

- Financing is the key problem
  - Banks don`t believe in this type of projects.
  - Open the market for bioelectricity.

Policy challenges

- How to best organize the integration and involvement of stakeholders in strategy development and implementation (government, banking, investors, providers of technology/innovation, distribution, final users)?
- What are the best-working cornerstone policies?
- Goals and broad policy frameworks are not enough. Need to find new bureaucratic and administrative processes that make the policy functional.
- Although in some countries there is a strong policy related to renewable energy, its effect on biogas energy utilization have been minimal.
  - Detailed information about technologies, bioenergy potential, technologies, and markets are non-existent, so each biogas-related initiative must invest significant resources, even at screening or pre-operational levels
- In some countries, biogas use as energy source is highlighted the energy policy, there is no plan for implementation
- In some countries, there is renewed interest in the support biogas to address problems with high amount of intermittent resources

Proposal for online sessions structure & content

Sessions organized by geographical setting, role and scale of operation:

- Rural (small to large)
- Urban (mid to large)
- Farm (small)

Topics to be discussed in each session

- Governance
  - Laws, regulation, standards, certification and non-governmental initiatives setting the framework for biogas investments
- Business cases:
  - Installation, maintenance and operation (M&O), financing and economic feasibility for operators or contractors
  - Industry lookout: needed importers, producers, builders, service providers (e.g. M&O)
- Implementation on the ground:
  - Site identification, getting permissions, construction, securing input and offtake via contracts

Session 1. May 23
Rural Biogas: Power to the Farmland

- Technology: medium sized digesters with CHP to produce power and heat
- End use:
  - Off-grid electricity/heat for large farms and/or agricultural processing
  - Mini-grids for electricity/heat for rural communities/towns
  - Grid-connected electricity if grid access available; in combination with self-consumption of electricity/heat
  - Digestate as fertilizer in all cases
- Input: residues (e.g. press mud, manure, household waste), energy crops from marginal or unused agricultural land
- Advantages: waste management, stable energy supply, residual load supply to compensate volatile wind and solar; value stays is region

Session 2. June 20th
Urban Biogas: Don‘t waste your waste!

- Technology: Medium to large-scale biogas plants with CHP (power/heat) or upgrading to biomethane (cooking gas, transportation fuel, grid injection)
- End use:
  - grid-connection – power, heat, natural gas
  - Self-consumption, if operated by industry
  - Self-consumption of biomethane as transportation fuel, e.g. municipal companies
  - Biomethane for various end uses via grid injection – remote CHP, heating (incl. Industry), transportation fuel
  - Fertilizer from digestate
- Input: Urban residues such as organic fraction of Municipal Solid Waste, kitchen waste, sewage sludge, grass cuttings, water plants
- Advantages: waste management, flexible power source for residual load, high efficiency through high demand for power and heat – high utilization rates

Session 3. July 1th
Farm Biogas: Energetic cows & crops

- Technology: small scale digesters (e.g. bag systems), connected to cooking stoves
- End use: replacement of wood, coal etc. for cooking
- Input: cow manure, kitchen waste, other organic waste
- Advantages: reduction of waste, replacement of unsustainable fuels, forest protection, health (clean burning), comfort

Feedback from participants

Suggested changes

Discussion

In-person workshop
August 20th, Montevideo

- One day workshop
  - Business models and financing
  - Enabling policies
- Interactive sessions to exchange experiences, discuss cases, learn about tools
- Closed meeting for participants in the Community of Practice – those who have attended the online session.
- Possibility of funding (plane tickets and hotel) for a number of participants – one or two per country, depending on donor criteria
- Agenda and information on support allocation to be provided during the May 23rd meeting

Wrap-up

Summary of discussions

Logistics for next meeting

Thank you!

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