GREEN SETTLEMENTS IN SUB-SAHARAN AFRICA

Topic: "Integrated Energy Farms Meet Africa Economy: Who Will Invest?"

By:

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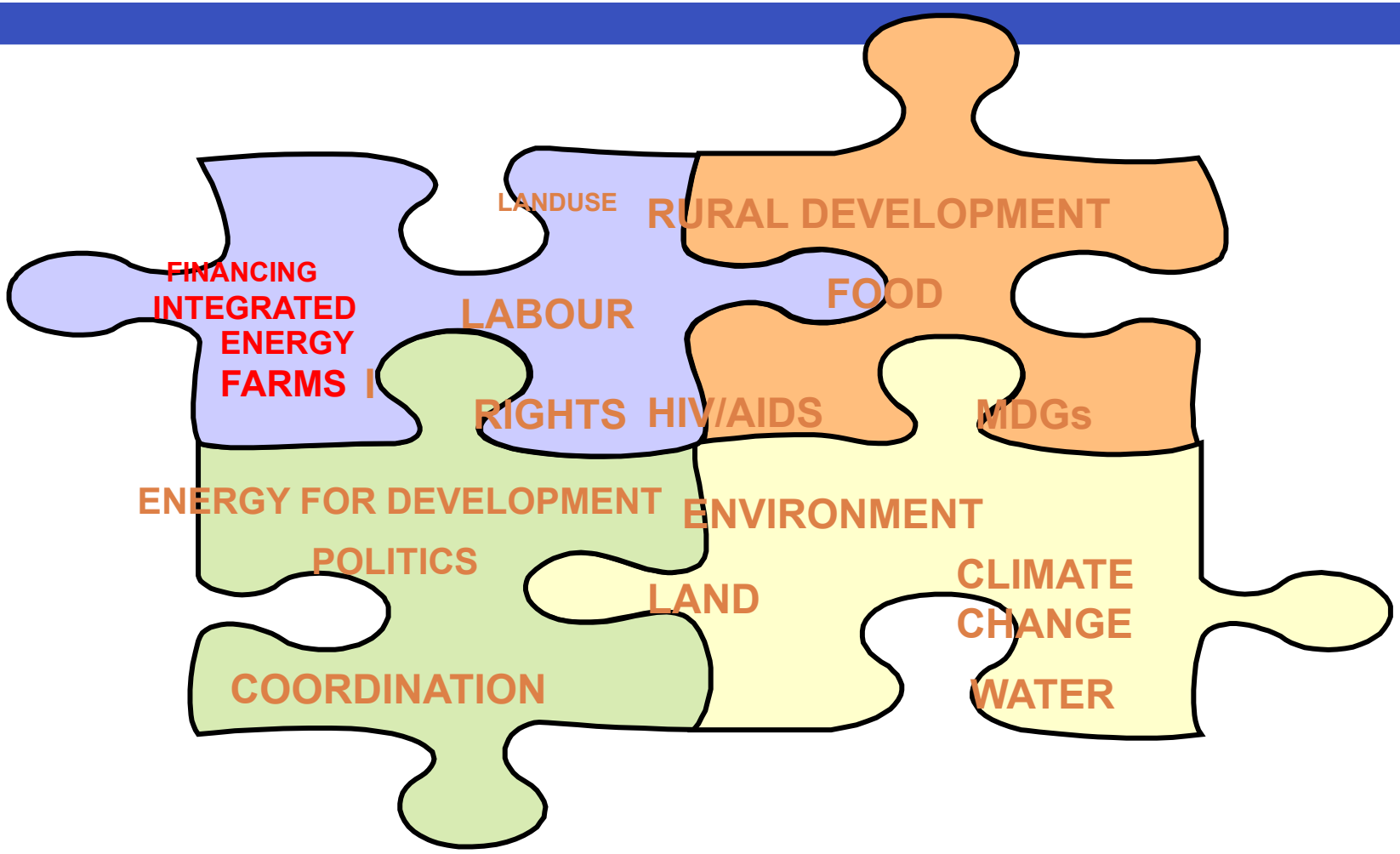
The Integrated Energy Farm Model

- This is a replicable model for applying clean energy technologies in unserved rural and peri-urban communities and commercial agriculture, thereby making a significant contribution to poverty reduction and environmentally sustainable development
  - Produces commercial agricultural crops such as vegetables, fruits, flowers, cereals/ grains, legumes, etc. Other possible agriculture produce include honey, fish, birds, ruminants etc
  - Intercrop with energy crops such as soy bean and sunflower is possible
  - Produces own vegetable fuel, gas, electricity etc from renewable energy carriers
  - Uses equipment powered by renewable energy to produce high-value agricultural products

Advantages of an Integrated Energy Farm

- Economically sound – provides multiple revenue sources for farmers
- Brings sustainability to widely unsustainable traditional farming throughout Africa
- It does not require high value arable land to start from, however, sufficient rain is necessary
- Tropical soils can be converted into high value arable land over a relatively short period of time
- Food vs. fuel becomes a non issue as the fuel crop enables /recover land for planting food crops
- Africa gets both, food and energy from agriculture

Creating Integrated Energy Farms – The Puzzle!



Credit: Lameck Mwewa

Existing Sources of Funding

- Gifts and Grants
- Government Subsidies
- Development Assistance
- Guarantees
- Insurance
- Concessionary Loans
- Commercial Loans
- Concessionary Investment
- Commercial Investment
- Supplier Credit
- Customer Up-front Payments
- Entrepreneur’s capital

The Finance Spectrum

Development/
Public Sector

Commercial/
Private Sector

→Gifts and Grants

→Subsidies

→Development Assistance & Specialized Programs

→Concessionary Loans & Investments, Micro-credit

→Entrepreneur's Equity

→ Supplier Credit

→Commercial Loans, Investment, Insurance etc

Credit: Dr. L. Agbemabiese

Local Challenges

- Availability of capital – seed and growth capital
- High cost of capital – high interest rates
- High cost of energy products/technologies
- Insufficient consumer and micro-enterprise finance
- Low level of policy attention and institutional framework – equity and cost sharing

- Too few intermediaries
- Poor quality energy products − low confidence
- Knowledge gap-low level of awareness of energy products
- Capacity gap-lack of technical and managerial capability for farmers to manage their energy systems

How can these Gaps be Closed?

- Need to thoroughly re-engineer funding products to reflect the very different economics of farming communities
- Need to build funding products with entrepreneurial mindset
- Funding will have to be made available in affordable units
- Funding channels may need to be rethought - atleast to involve entrepreneurs from among the poor and the beneficiary farmers
- Work collaboratively with civil society organizations and local governments

How can these Gaps be Closed? (Cont.)

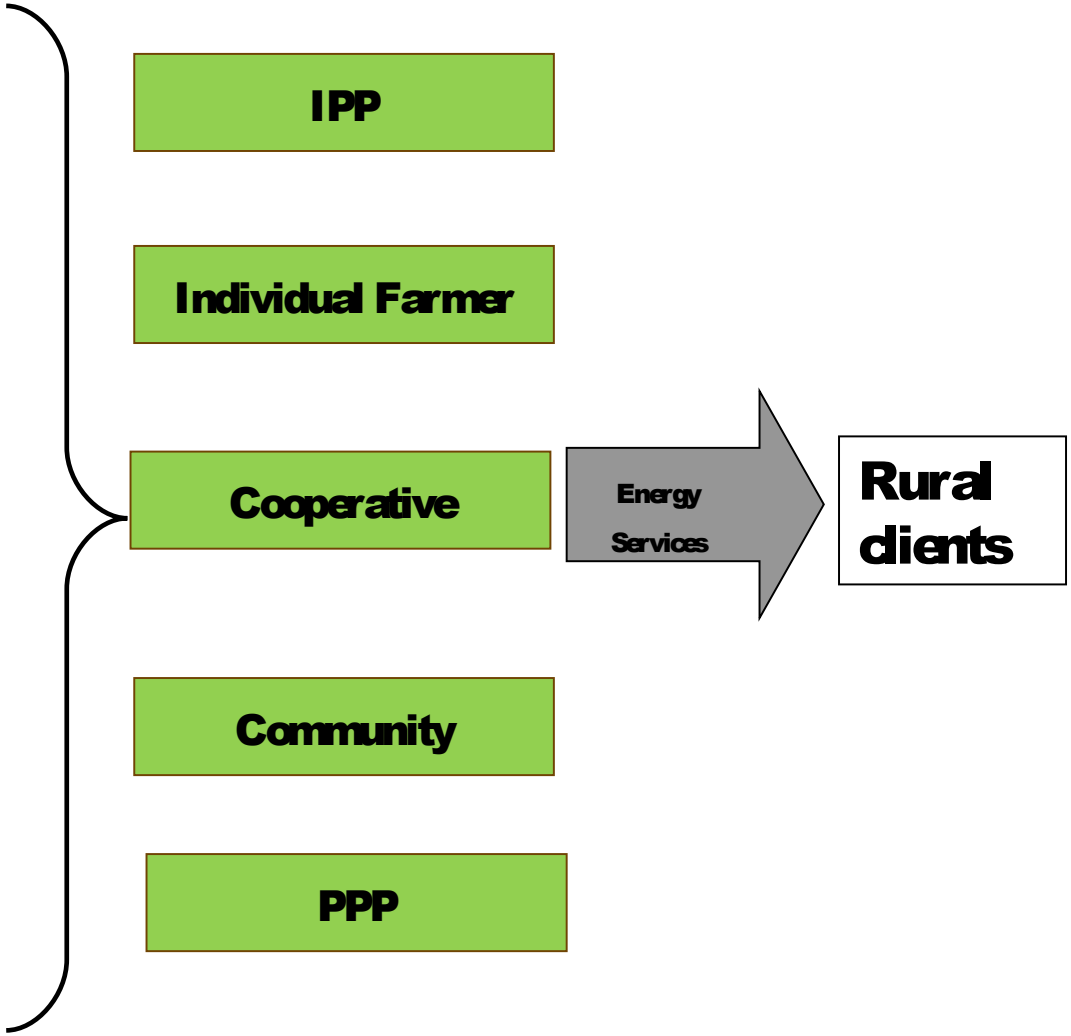
- Expand the number of intermediaries providing services and financing to beneficiary farmers
- Increase the available seed capital to farmers
- Increase the available pools of next stage capital to farmers
- Provide capital at realistic return/expectations to farmers
- Expand access to innovative consumer finance to farmers

The Business Case

Empowerment/Agency

- Training and tools to help entrepreneurs start and develop energy businesses
- Enterprise start-up support in areas such as business planning, structuring and financing
- Seed capital for early stage enterprise development
- Partnerships with banks and NGOs involved in rural energy development

Management/Ownership Model



The Business Case (Cont)

The two main service models:

1. Fee-for-service
   - Subsidies
   - Favorable tariff regimes required – lifeline tariff to protect the poor

1. Outright sales of RE systems
   - Financial incentive for entrepreneurs (tax waiver etc)
   - Micro-finance (loans and savings) – financial inclusion for community members
   - After-sales support etc

Key Success Issues for Investment

Key success factors and pre-conditions for investment in integrated energy farms/communities:

- Economic
- Social
- Environmental

The Triple Bottom Line Issues

- Appropriate models based on local knowledge
- Realistic returns for investors – IRR 16-30 percent
- Appropriate policies and regulations – the case of concessions

Who will Invest?

- Global Public Banks- Kfw, WB, ADB, etc – release funding with better rates and conditions
- Multilateral and Bilateral donor organizations – EU, GIZ, JICA, SIDA, etc
- Commercial Banks – International, regional and local – Ecobank, HSBC (Global Investment Fund- CC Fund) etc
- The Global Environmental Facility (GEF) - Special Climate Change Fund, Least Developed Country Fund, Adaptation Fund
- UNFCCC process - Fast Start Finance (USD 30 billion)
- The Global Village Energy Partnership (GVEP)
- African Biofuels & Renewable Energy Fund

Conclusion

- Innovative partnerships with public, and the private investors is critical for attracting investment for integrated energy farms

- Engaging the private sector to invest in integrated energy farms will require resources, time, a proven business model, handsome returns and commitment on the part of project implementers

Thank you

Profile of the Presenter

Frank Atta-Owusu (Mr.) is a Senior Projects Manager in KITE. He has over eight years working experience in the energy and environment sectors. He has led a number of projects and socio-economic surveys conducted by KITE in Ghana and in the West Africa subregion. Mr. Atta-Owusu served as a technical consultant for the drafting of the ECOWAS White Paper on Energy Access for Rural and Peri-urban areas and coordinated country level work in five Anglophone ECOWAS Member States. He has made presentations on a variety of issues on energy and sustainable development in Africa, Europe and America. He began his career as a National Service Person with Amex International Incorporated under the USAID-Ghana Trade and Investment Reform Programme- Increased Private Enterprise Performance Project (IPEP) in 2001 and subsequently joined Sunstex Company Limited-a Timber Processing firm based in Kumasi-Ghana- where he worked as the Finance and Administrative Officer. He joined KITE in July 2003 as an Assistant Projects Officer and rose to the position of Senior Projects Manager in September, 2009. He holds Bachelor of Commerce (B.Com) degree from the University of Cape Coast and an Executive Masters of Business Administration (EMBA) degree from the University of Ghana. Mr. Atta-Owusu is currently a candidate of the Master of Arts Development Studies Programme at the University of Ghana.

Specific competencies and skills :

- Small and medium enterprises start up
- Business plan development
- Strategic management and systems implementation
- Policy research
- Donor and client relationship management
- Project management

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