# Building the First Biochar Plant in Benin

Supported by the Association of African Entrepreneurs and the Association Defense Jeunesse et Solidarite (ADJS-NGO)





#### Benin

Located in West Africa, approximately ie size of Pennsylvania

Official Language: French

Population: 9.8mm

**Literacy: 42.4%** 

#### Economy

- Dependent on subsistence agriculture
- GDP: \$15.8b

• Services: 57.7%

Agriculture: 35.9%

Industry: 6.4%





# Energy in Benin

### Electricity

Production: 120 million kWh (192/196 countries)

• Installed Generating Capacity: 60,000 kW (176/196 countries)

• 98.3% of the Installed Capacity is Produced by Fossil Fuels

Carbon Dioxide Emissions from Energy Consumption

• 3.6 million Mt. (132/196 countries)

Related Environmental Issues

- Deforestation
- Desertification







# The Project

The Association of African Entrepreneurs and ADJS NGO are fundraising for, nanaging and building out Benin's <u>First</u> Biochar Energy Plant

#### **Project Goals:**

- Provide much-needed electricity to Benin's agricultural communities
  - Encourage and support the usage of "Green Coal" in place of wood for fuel
- Create local, long-term jobs in Benin
- Help prevent climate change, desertification and deforestation in Benin







## What is Biochar?

- Biochar is created by heating biomass in an oxygen-free chamber in a process called pyrolysis. Biochar or "Green Coal" is a type of sustainable charcoal:
  - "Green Coal" is created from sustainable biomass resources such as waste yard trimmings, agricultural refuse, leaves, grasses, and manure
  - Biochar or "Green Coal" can be used as a Carbon Sink, meaning Biochar sequesters carbon in the coal, which can then be buried, preventing the release of CO2 into the atmosphere



## The Biochar Fuel Manufacturing Process



- The biochar fuel plant will use a carbonization machine called aPyro-6F, which will continuously recycle CO as an energy source for the pyrolysis process
- The plant will produce biochar "bricks" from locally produced waste biomass, collected year round by hired village groups
- The biochar will be sold in Beninese market places and its proceeds will help fund the future biochar manufacturing plants in benin





## Funding Breakdown

The Biochar Plant requires \$86k in funding

ADJS is self-funding 30% (\$26k) of the total project cost

ADJS is fundraising for \$56k of which \$52k will be used to purchase manufacturing equipment

Expense	Amount
Equipment	
Manufacturing Equipment	52,000
Computers	3,600
Digital Camera	1,800
TOTAL EQUIPMENT:	58,600
Occupancy	
Building for Manufacturing Plant	6,000
Motorcycle	1,500
Office Supplies	1,200
TOTAL OCCUPANCY:	8,700
Salaries and Management:	
Travel	1,500
Audit Expense	1,000
Grant Management (5%):	3,885
Salaries	12,000
TOTAL SALARIES AND MANAGEMENT:	18,385
TOTAL PROJECT EXPENSE:	85,685.00



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