

ADEME



Agence de l'Environnement  
et de la Maîtrise de l'Énergie

Club ADEME  
International



Benin - Cotonou



**Duration**  
1 year



**Total costs**  
226 000 €



**Staff called up**  
16 personnes

### Thematic



### Services performed

Studies  
Equipment Delivery - Commissioning

## Goal environmental



Affordable  
and clean energy



Industry, innovation  
and infrastructure



### COLDINNOV

## Cotonou airport solar cold room

*Design, manufacturing and commissioning of a 100 m<sup>3</sup> cold room powered by a 40 kWp solar photovoltaic plant and designed to refrigerate 12 t/day of pineapple from Benin for export via Cotonou airport.*

*The cold room is integrated into two assembled 40 feet containers. Energy autonomy is achieved using 120 kWh of batteries and 60 kWh of cold eutectic plates.*

### French partners



### Foreign partners



Projet PINEX



Maitre d'œuvre



### the project's objectives

As part of the PINEX (Pineapple for Export) project, the US NGO Partners for Development has set up since 2015 a program to develop Benin pineapple cultivation and export. One of the main problems encountered was the lack of refrigeration infrastructure at Cotonou airport, which implied a sharp decline in the quality of exported products.

To overcome this difficulty, the construction of a cold room has been decided. To meet sustainable development goals it has to be powered by solar energy.

## Milestones

- March 2018: Participation in the call for tender launched by Partners for Development
- July 2018: Signing of the COLDINNOV cold room supply contract
- August-October 2018: Finalization of the design, modular manufacturing at the Toulouse site
- October-December 2018: shipment of the equipment to Cotonou - Preparation of the implantation site by the Beninese firm CAB Industries
- January 2019: Assembly of the various components by CAB Industries and SINEB
- February 2019: Inauguration of the solar cold room

## Local customers and beneficiaries

The sponsor of the project is the US NGO Partners for Development. The funding comes from the US Department of Agriculture (USDA). The manager of the cold room is the Société des Aéroports du Benin (SAB). Local customers are the Benin Ministry of Agriculture and the Benin Pineapple Exporters Association.

## Post-project results

This project brought an important visibility of our know-how. It paved the way for other FREECOLD solar cold room projects in Africa.

For customers, this project has improved both the quantity and quality of exported pineapples, allowing them to be sold for a better price and reducing value losses of the products.

## Environmental impact

- Replacement of the use of fossil electricity by solar energy
- No increase in air traffic despite increased pineapple export (use of available freight on departing commercial aircrafts)
- Decreased pressure on agricultural land since fewer pineapples are produced for the same quantity sold (less losses)

### They said it...

*With this cold room, exporters will no longer have trouble conveying their pineapple at the Cotonou airport at any time of the day, as soon as the yield is finished in the fields. There will be less concern for pineapples that cannot be shipped on the flight of the day for lack of space. Their stay in the cold room until the next day's flight will allow these fruits to keep their freshness and quality.*

**Cynthia Taha**

Director of Partners for Development in Benin



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With more than 130 members, the Club ADEME International assists the SMEs in its network in the development of innovative projects and international partnerships. The objective is to participate in the dissemination of French knowledge, by supporting the private and public sector in the ecological and energy transition sector in order to meet global environmental and climate challenges.

**For more information : [www.clubinternational.ademe.fr](http://www.clubinternational.ademe.fr)**

