

EBONYI HYDROPOWER PROJECT

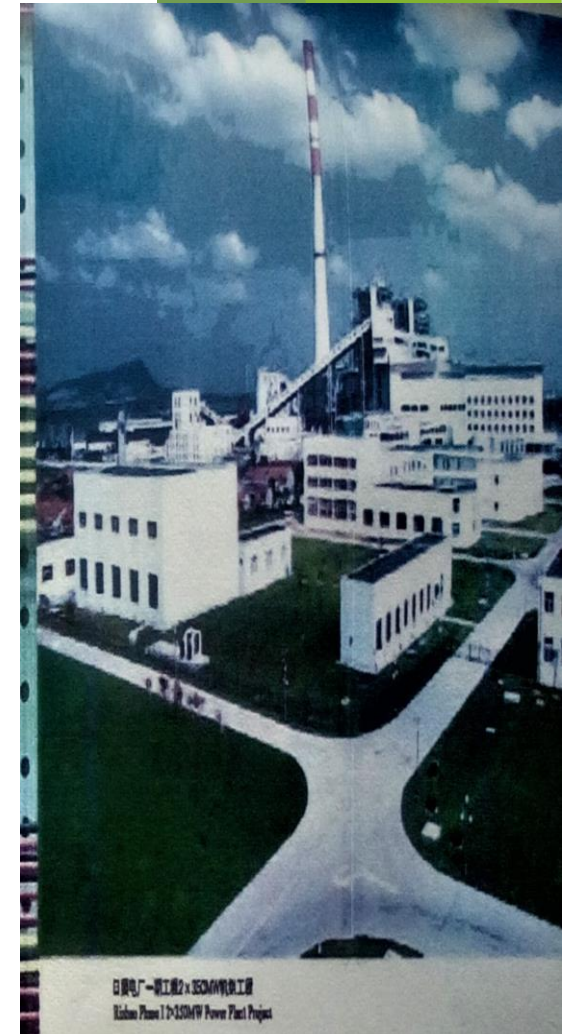


*SEPCOIII Electric Power
Construction Corporation
embarked on project site
inspection and advocacy tour to
Ikwo LGA.*



His Excellency Rt.Hon. Francis Ogbonna Nwifuru

Executive Governor
Ebonyi State



中国电力—尼日利亚2x350MW火电项目
Nigeria Phase 1 2x350MW Power Plant Project



Ebonyi Hydropower inspection site tour and advocacy meeting:

- 1. Opening Remarks by Ikwo Council Chairman**
- 2. Remarks by the team Regional Director of Sepcoiii Electric Power Construction Corporation**
- 3. Pictorials.**
- 4. Inspection Tours**
- 5. Group photographs**

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Barr. Sunday Nwankwo
Executive Chairman
IKWO LGA

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The Regional Director of SEPCOIII Frank Yibo in group discussion with management staff of Ebonyi Investment and Property Company LTD during the first visit to Ebonyi State



We are glad that Ebonyi state Government is interested to develop a 45MW Hydro Power plant.

SEPCOIII is a professional EPC Constructor for all kinds of power plant, including gas-fired, coal fired, wind farm, solar, hydro, nuclear, biomass, substation and transmission line. SEPCOIII has experience in Saudi Arabia, Oman, Jordan, India, Morocco etc.

In Nigeria, we have completed 2 NIPP power projects - 2 phases of Olorunsogo power plant in Ogun State, with the capacity of 336MW and 750MW. We perform as EPC contractor for these two projects, and they are now all in commercial operation.

Today, we are here in Ebonyi to replicate the same project hoping that Ebonyi state will be hospitable, friendly and supportive. We intend to create 500 skilled and 1,000 unskilled labour with this project in Ebonyi.

During our second visit to Ebonyi State, the Head of Ebonyi investment Agency and his team took us round to the proposed location site for inspection. We have inspected the proposed site and hoping to have a robust engagement with the locals.

FANG YIBO

REGIONAL DIRECTOR

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5 PROJECT OVERVIEW

The project is to construct a hydropower plant, which will be known as “**Ebonyi State Hydropower Plant Oferekpe (EBHPP)**”. The Ebonyi State Hydropower Plant Company will be located at Oferekpe in Ikwo local Government Area of Ebonyi State. The hydropower plant will generate over **45MW** of electricity to the state and provide source of water supply to the existing State-owned Water Scheme.

Preliminary investigation shows that a medium size gravity dam made up of mass concrete across the **550m** width of the river and to height of **50m** and a hydraulic head of **45m** will be adequate.

The project will involve, planning, Engineering Design, Procurement, construction of Dam and installation of three turbines rated **15MW** each, three penstock pipes, electric generators, powerhouse, and other ancillary equipment, including distribution facilities such as Transformers, High- and Low-Tension Cables, Power Masts, Feeder Panels, Meters etc. Provision for Personnel quarters and operational expenses for at least three years will be provided. The Dam after construction should generate up to **5,184million cubic meters** of water.

The Table below show summary of the Hydro Power Project:

Name	Oferekpe Hydro Power
Location coordinate	6°1'36"N, 8°17'00"E
Type of Dam	Medium size, mass concrete gravity c
Purpose	Hydroelectricity, Water Supply
Hydraulic head	45m
Height	50m
Length (x sectional width)	550m
Impounds	Enyim River
Reservoir	None (On the run)
Turbines	3
Penstock	3
Expected Power output	45MW
Annual Power generation	141.9GWh
Discharge volume	5,184 million cubic meters
Expected cost	\$15 million
Expected (ROI)	\$13.4 million annually

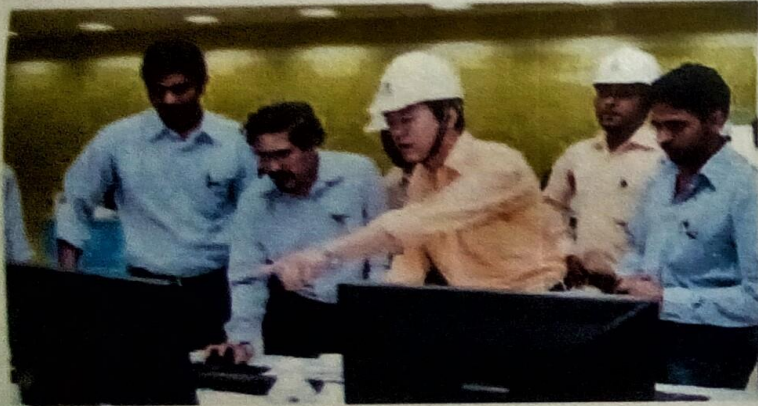
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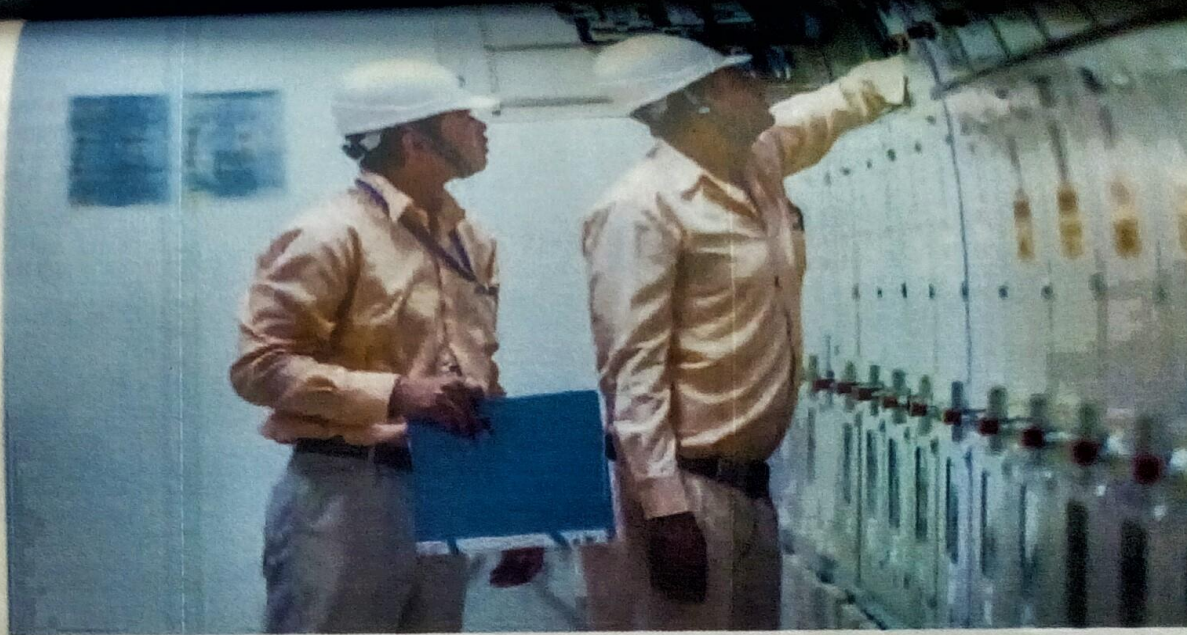
调试运行维护能力

Extraordinary Commissioning Operation Maintenance Capability



公司拥有240人的专业调试团队，50多人的运行维护管理团队，迄今已先后高质量完成了60余台各类型机组的调试和性能试验技术服务工作，拥有丰富的调试运行工作经验。公司还出色地完成了多台机组移交后的保运工作，派出售后服务小组对业主运行人员进行技术指导和培训，确保机组的安全、稳定、经济运行，为业主创造最大的收益。

SEPCO III has a 240 people professional commissioning team, a 50 people operation and maintenance management team, which completed more than 60 units large-scale power plant's commissioning and performance testing services, and already has a wealth of experience in operation and maintenance. Moreover, SEPCO III has undertaken operation-guarantee work after turnover of units. SEPCO III sent an after-sales service team to provide technical guidance and training for the owner's staff in order to ensure the unit's security, stability and economic operation, and create the maximum benefits for the owners.



大型试验 Large-size Test

公司承建的EPC工程，均成功实现了无人干预的RB、甩负荷、负荷摆动、升速率、PSS、孤岛运行、一键试验，为实现机组的高度自动化夯实了基础，也大大降低了业主方的运营成本。机组年运行时间平均达到1上，为业主创造了较高收益。

All of the EPC projects that SEPCO III constructed has achieved many large-size tests, including IPL RB, load shedding rising rate, PSS, isolated island operation and one-key start-up and shutdown, which lay a solid foundation for high automation and enormously reduce the operation & maintenance cost for the owner. The average annual operation time hours which creates high profit for the owner.

一键启停 One-key Start-up and Shutdown

公司成立专业技术攻关小组，通过对厂家资料的研究、逻辑的编制、大量的试验，研究开发了自动化顺控“一键启停”技术，并在阿曼萨拉拉、尼日利亚帕帕兰多、沙特拉比格项目的顺控启动和停止中顺利投用，即在DCS顺启动顺序点击相应的启、停按钮即可完成整套机组的顺控启停，不需要运行人员单独启、停设备，开创了中国自动化、智能化启停的先河。

SEPCO III established a professional team strives to make technological breakthrough. Through manufacturer information logical written and plenty tests. SEPCO III develop the technology of automatic sequence control start-up and shutdown One-key Start-up and Shutdown, which successfully applied in the sequence control start-up and shutdown system of On Project, Nigeria Papalanto Project and Saudi Arabia Rabigh Project. The one-key start-up and shutdown means that achieve the whole unit start-up and shutdown, the operation staff do not need to start-up or shut-down the equipment separately only click the start-up and shutdown button according to the sequence in DCS. This is unprecedented in the power plant and intellectualization in China.

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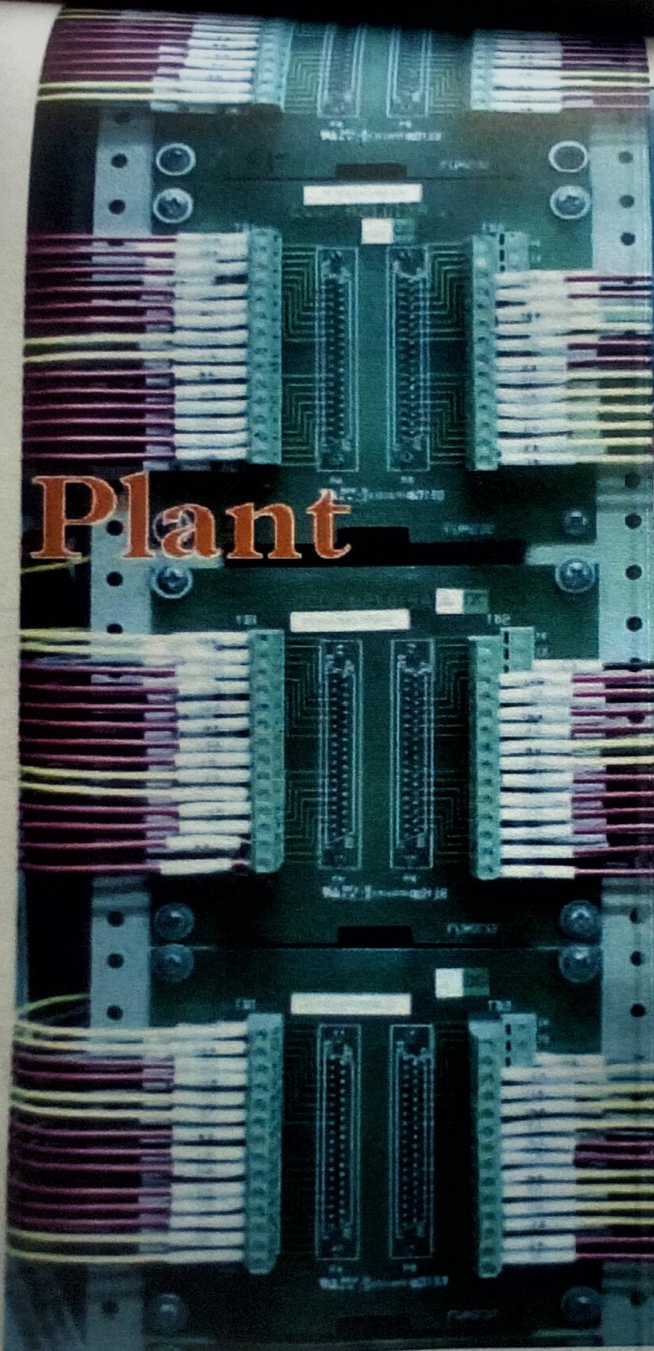
Model Power

Plant

典范之作

2002年11月，公司承建的日照电厂一期工程2×350MW机组获得了中国建筑行业最高奖——鲁班奖。

2001年以总分第一的成绩被评为“国家电力公司优质工程”；2002年9月被评为“全国用户满意建筑工程”。



日照电厂一期工程2×350MW机组工程
Rizhao Phase I 2×350MW Power Plant Project

In November 2002, Rizhao Phase I 2×350MW Power Plant Project constructed by SEPCOIII won the highest award in the Chinese construction industry, the鲁班 Prize.

In 2001, Rizhao Phase I 2×350MW Power Plant Project was selected as the Project of Excellence by the Chinese construction companies. In September 2002, it was awarded the prize for gaining the highest satisfaction rating in China.



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APPRECIATION:

Ebonyi State Investment and Property Company LTD wishes to appreciate the Governor of Ebonyi State His Excellency, Rt. Hon. Bdr. Francis Ogbonna Nwifuru for his supports and enabling environment in the state for the investment to thrive in Ebonyi State.

With the coming of SEPCOIII to invest in Hydropower project in the state, Ebonyi State Investment and Property Company LTD team will ensure effective coordination and synergy with the host communities.

Welcome to Ebonyi state.

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