TRISTAN H. CALASANZ

BSME, BSEE, Associate Lecturer
http://www.thcal.com

A] Power/Energy, Technical and Corporate Management

Accomplished a turn-around in Operations nationwide in three years, as Vice-President for Utility Operations of the National Power Corporation of the Philippines (NAPOCOR):

1. *From year-to-year losses, to profitability, making the equivalent gross income of US$1 billion in 1983 on operating assets in excess of US$10 billion; Energy-Efficiency projects generated the equivalent of US$15 million savings in 1983*
2. *Complied, in 1983, with the loan covenants on "rate of return on rate base" (RORB) with the World Bank and the Asian Development Bank for the first time in NAPOCOR's 40+ years history*
3. *Achieved technically acceptable reliability and efficiency in all the electric grids in the country (power plants, substations, transmission lines) to meet the performance standards of IEEE*
4. *Re-established the National Power Corporation's financial and technical viability through a decentralized organization.*

REPUBLIKA NG PILIPINAS
Pambansang Korporasyon Sa Elektrisidad
(NATIONAL POWER CORPORATION)

This

PLAQUE OF APPRECIATION

is awarded to

MR. TRISTAN H. CALASANZ

In grateful recognition of the leadership he provided in his capacity as Vice-President for Utility Operations for: a) bringing about reliable operations of the Luzon Thermal plants, b) upgrading the management capabilities of the regional centers, and c) pioneering the in-house and local design, fabrication and commissioning high technology control systems; in sincere acknowledgement of his signal contribution to the Corporation during the past difficult years, and in consideration of the zeal and devotion to duty that he has demonstrated during his stay in the National Power Corporation.

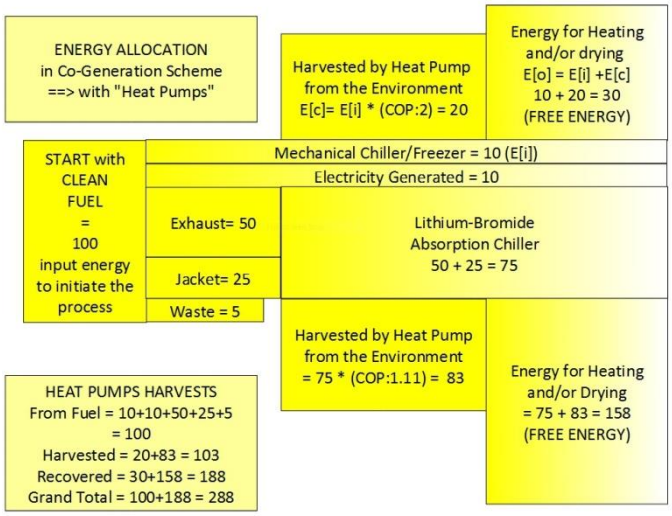
Given this 31st day of May, Nineteen Hundred and Eighty-Four in Quezon City, Philippines.

GERONIMO Z. VELASCO
(Chairman)
National Power Board

Attested:
DIONISIO E. REYES
Corporate Secretary

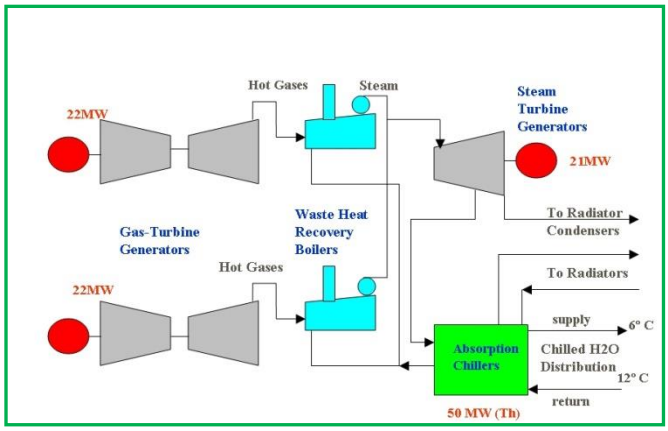
B] "My vision of Energy" moves towards the more sustainable.

A clever configuration of Combustion Engines, Exhaust Heat Recovery to drive Heat Pumps allows system fuel input of 100 kW-hours to HARVEST ENERGY from the Environment, resulting in total useful WORK of 288 kWh. This is physically achievable only with heat pumps INCORPORATED into the system.



ENERGY. The "New Energy" concept is an approach that enables us to psychologically alter our consciousness. It allows us to treat the pursuit for new energy as an investment. As such, it carries with it an internal rate of return and payback. It is NOT like cost that flows down the river never to be recovered ever. Our planning and conceptualization is often colored by psychological preconceptions and baggage that engineering practice has imposed upon us. New Energy is that which a process would ordinarily waste into the atmosphere, but which we have succeeded in recovering in order to produce more work. Processes have inherent inefficiencies, and this includes combustion cycles. As we find ways of making them efficient, we will have successfully mined new energy. New energy is also that which we "harvest" from our environment. And we now call it "renewable energy"..

C] Energy-Efficiency Project.



Successfully gained approval from the Governing Board of First Private Power Corporation in the Philippines for Stage 1 (US$65-million) of a 2-Stage co-generation facility to produce and supply

- electricity, process steam at 10 bars and chilled water at 7 degrees Celsius
- resulting in a design overall thermal efficiency better than 60%
- I conceptualized and was project leader for the all the preparatory work, leading up to and including bidding, for this Stage 1, with an output of 65 mW(electric) and 50 mW(thermal), that we implemented in 1999 with international bidders participating.

D] Developed Financial Models and Undertook Feasibility Studies

for the preparation of bid documents for power plant projects:

- 600 mW Pumped-Storage hydro
- conventional hydros
- diesel-electric power plants
- geothermal power plants

E] "Energy Adviser" for Undergraduate Engineering and Master's Theses, and "Energy Expert Resource" at the Ateneo de Manila University.

Responsibilities included:

- Adviser: Graduate and Undergraduate Research in Energy
- Adviser: Undergraduate Research in Automation and Controls
- Adviser: Power Electronics, Computer Interfacing, Analog and Digital Controls
- Designed and Built Prototype: Hybrid-Electric Vehicle Design and Implementation

The classroom is a platform for the growth of human beings. Teachers manage this platform to facilitate the creation of an environment where the human being's "freedom to think" is unleashed and enhanced.

F] Other Positions Held:

- Vice President for Project Development
- Vice President for Power Utility Operations
- Vice President for Human Resources
- Chairman, Energy Committee of the Philippine Chamber of Commerce and Industry
- Head, Human Resources Development Division
- Chief, Nuclear Plant Systems Division
- Chief, Nuclear Training Section
- Nuclear Instrumentation Technologist, 3-mW(thermal) Nuclear Research Reactor

G] Engineering Degrees - Mapua Institute of Technology, Philippines

Jul 1, 1956 - *Bachelor of Science, Mechanical Engineering (Academic Scholar)*

- Placed Fifth in the Government's National Board Examinations for Mechanical Engineers

Jan 31, 1958 - *Bachelor of Science, Electrical Engineering (Academic Scholar)*

- Graduated recipient of Silver Medal of Honor
- Placed First in the Government's National Board Examinations for Electrical Engineers

H] Major accomplishments . . .

- Vice President for Utility Operations
  - Assets: US$10 billion; Gross Revenues: US$1 billion (1983)
  - Energy-Efficiency Savings: US$15 million (1983)
  - From losses to profitability in 3 years, complying with Covenants with the ADB and the World Bank with respect to Rate of Return on Rate Base, for the first time
- Vice President for Project Development
  - Co-Generation Facility: Conceptualization, Feasibility Studies, Engineering, Bid Evaluation
  - Project Investment: US$65 million
- Associate Lecturer - Designed, built, and commissioned
  - Prototype Hybrid-Electric Vehicle
  - Prototype Braille System for 5 Visually Impaired, using only ONE PC