



Philippine Economic Zone Authority

“PEZA’s Initiatives on Energy Efficiency and Conservation”

by

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- II. PEZA's Initiatives on Energy Efficiency and Conservation**
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- V. The Way Forward**

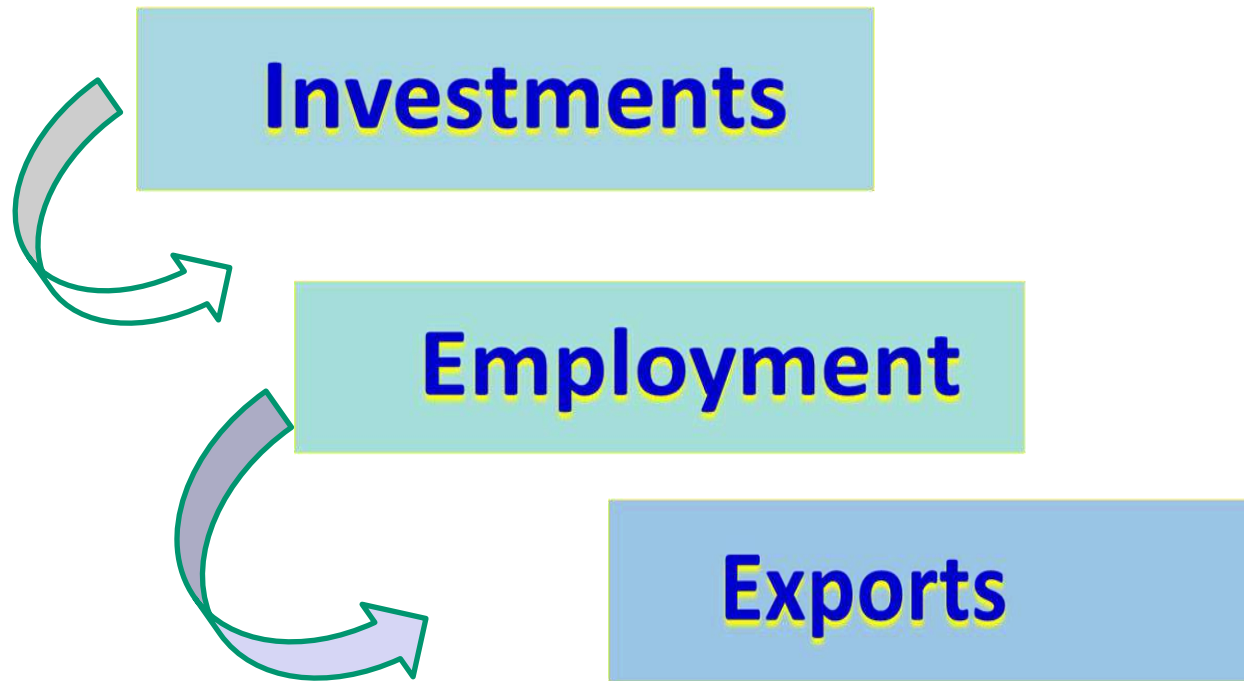


I. Philippine Economic Zone Authority: An Introduction

Philippine Economic Zone Authority

A Government-Owned and Controlled Corporation attached to the Department of Trade and Industry (DTI).

KEY RESULTS AREAS:



Philippine Economic Zone Authority

NON-NEGOTIABLE TO PEZA

- **Environment**

- Working together with the Climate Change Commission, PEZA is developing capacity training programs on climate awareness and the cultivation of best low carbon practices in its public ecozones.
- Intended Goal: Mainstream Eco-industrial sustainability in PEZA's policies and processes where applicable

- **Rights of Workers**



LOCATOR COMPANIES

**From 331 to
4,147
and counting**

***As of December 2017**

TOTAL PEZA DIRECT EMPLOYMENT

1,417,832

Total Indirect Employment (x 5 of total direct
employment): **7,089,160**

***As of December 2017**

TOTAL PEZA INVESTMENTS

**Php 3.614
Trillion
And Counting**

1995- 2017

TOTAL PEZA EXPORTS

**US\$ 706.285
Billion
And Counting**

1995- 2017

Total PEZA Operating Economic Zones – 380

Manufacturing (74)



IT Parks/Centers (263)



Tourism (19)



Medical Tourism (2)



Agro-Industrial (22)



Proposed DMEs (new)



(As of December 2017)

PUBLIC ECONOMIC ZONES OWNED BY PEZA

1. Baguio City Economic Zone
2. Pampanga Economic Zone
3. Cavite Economic Zone
4. Mactan Economic Zone





PHILIPPINE
ECONOMIC
ZONE
AUTHORITY

*BCEZ:
A Fusion of Business
and Leisure*

B
C
E
Z

COMPANIES LOCATED IN BAGUIO ECOZONE

103 companies

- 48 in Baguio City Ecozone
- 55 Support Companies (PTL)

(As of December 2017)

ECONOMIC ZONES IN BAGUIO

I. Baguio City Economic Zone

II. John Hay Special Tourism Economic Zone

III. IT Buildings/Centers

A. SM City Baguio Cyberzone Building

B. Neutrinos IT Center

C. Abanao IT Building

PERFORMANACE OF BAGUIO ECOZONES

As of December 2017

TOTAL DIRECT EMPLOYMENT

TOTAL SALARIES & WAGES

14,489

4.9 B

(without PTL)

(in Php)

PERFORMANANCE OF BAGUIO ECOZONES

As of March 2017

TOTAL EXPORTS

1.91 B

(in US \$)

TOTAL INVESTMENTS

145 M

(in Php)

HOSTING THE NO. 1 EXPORTER IN THE PHILIPPINES (Since 1980)



TEXAS INSTRUMENTS

Faster, more flexible **multi-camera ADAS** system architectures


Enabled by the first dual-port CSI-2 quad deserializer hub



 TEXAS INSTRUMENTS

Industry's first direct RF sampling 14-bit, 3-GSPS ADC



 TEXAS INSTRUMENTS

MAJOR SMS and EMS PLAYERS IN THE COUNTRY



TEXAS INSTRUMENTS

ANALOG DEVICES

CYPRESS

HGST
a Western Digital company

B/E
AEROSPACE

TOSHIBA

Canon brother.

REMEC
BROADBAND WIRELESS

IONICS
EMS, INC.

muRata

MAXIM
INNOVATION DELIVERED

Microsemi

IMI

Continental®
TEMIC

FUJITSU TEN



MOOG

SUNPOWER



Notes:

SMS – Semiconductor Manufacturing Services

EMS – Electronics Manufacturing Services

Major Players Per Sectors:

- Semiconductor (Components / Devices)
- Computer Related Products / EDPs
- Office Equipment
- Consumer Electronics
- Telecommunications
- Communication/Radar

- Control & Instrumentation
- Medical / Industrial Instrumentation
- Automotive Electronics
- Aerospace
- Solar / PV

Source: SEIPI

II. PEZA's Initiatives on Energy Efficiency and Conservation



- ❑ Working together with the United Nations Environment Programme (UNEP) and Asian Development Bank (ADB) in developing local Public-Private Partnership (PPP) and/or Climate Smart Ecozones
 - Intended Goal is on making strategic interventions on climate policy convergence and harmonization, mainstreaming climate in operations and developing climate smart local PPP and ecozone project portfolio to secure climate resources.
 - PEZA's standards for a green economic zone that is compliant to legal environmental requirements.



□ PEZA-ECCP MOA on Energy Savings Program (26 Mar 2012)

- IRR in place since April 2013
- Conducted 12 energy efficiency and energy conservation seminars nationwide
- Main Focus: Plant-Level Energy Audits, High Efficiency Motors, Energy Services Company (ESCOs), District Heating/Cooling, Cogeneration, HVAC/Ventilation, Power Management, Renewable Energy Development, etc.



□ PEZA-DOE MOA on Energy Management System dated 02 May 2016 (UNIDO Grant)

- Capacity building for locators focusing on system optimization approach on Steam, Compressed Air and Pumping Systems and User Training on Energy Management Standards; ISO 50001



□ Completed Eco-Industrial Development Project in 2009

- Protect and conserve environmental quality in the ecozones (Sec.33 of the PEZA Law)
- PEZA model for an eco-industrial park which is patterned after the GTZ EID framework. (EIPs as low carbon or green zones)

PEZA on Promoting Energy Savings and Conservation

Regulate ecozone utilities such as power and water and to fix just, reasonable and competitive rates, charges and fees. (Sec 12c)

**Register qualified activities/projects with entitlement to incentives
(Sec 35)**

Protect and conserve environmental quality in the ecozones (Sec.33)

Ecozone Power Development Projects

Regulate ecozone utilities such as power and water and to fix just, reasonable and competitive rates, charges and fees. (Sec 12c)

- ❑ **Registration of Ecozone Renewable Energy Projects**
- ❑ **Embedded Distribution Utilities/Service Providers**
- ❑ **Embedded Conventional Power Generation Projects**

Eligible Energy Efficiency Projects/Activities

Register qualified activities/projects with entitlement to incentives

(Sec 35)

- 1 Manufacture for export of energy efficiency products
- 2 Embedded RE generation facilities: sale to the grid or to contestable customers
- 3 Developers of energy efficient buildings (except: IT buildings in MM & Cebu city; & Tourism Ecozones in MM, Cebu, Mactan & Boracay Island)
- 4 Ecozone Retail Electricity Suppliers doing supply contracting & demand-side Management for ecozone Contestable Customers
- 5 Embedded Power Generation & distribution

Eco-Industrial Development Framework

Protect and conserve environmental quality in the ecozones (Sec.33)

- Energy efficiency & renewable energy
- Improved performance by industries
- Compliance with environmental standards
- Conservation of natural resources
- Efficient environmental management
- Waste & water management
- (Hazardous) waste management



"Clean and Green, Inclusive Growth, Industrial Peace"

□ PEZA BR No. 16-068 dated 28 January 2016

- Sale of generated power by way of constructive exportation, subject to issuance of a Letter of Authority (LOA)

□ PEZA BR No. 15-239 dated 13 May 2015

- Ecozone locators' Tax and Duty-free importation of Energy Efficient Equipment/products, specifically Solar and LED lighting system (for self-use)
- Sale of Ecozone Manufactured Solar Panel and LED/LVD Lighting system for other ecozone locators (constructive exportation)
- Installation of a Centralized District Cooling System (Northgate, IT Park)

Other Energy Efficiency Measures

□ **PEZA-DOE MOA** on Energy Management System dated 02 May 2016 (UNIDO Grant)

Capacity building for locators focusing on system optimization approach on Steam, Compressed Air and Pumping Systems and User Training on Energy Management Standards; ISO 50001

III. BCEZ's Best Practices on Energy Efficiency and Conservation

BCEZ's Best Practices on EE & C

❑ BCEZ Engineering and Maintenance Division

- Strictly implements 70:30 Ratio on Greenery
- Technical Needs of the office and locators

❑ BCEZ Energy Efficiency and Conservation Team

- Identify programs and action plans for conservation of energy, water, fuel, supplies and other resources; or enhance existing programs;
- Conduct continuing education and information on how to conserve energy, water, fuel, supplies and other resources;
- Form strategic alliance with stakeholders



BCEZ's Best Practices on EE & C

OFFICE EQUIPMENT



BCEZ's Best Practices on EE & C

- Use of inverter type of aircon
- 2 aircon units used sparingly during big assembly
- Big windows are open



BCEZ's Best Practices on EE & C

Temperature of A/C units at 25⁰C



BCEZ's Best Practices on EE & C

Electrical appliances and electronic devices like computers, water dispensers, microwave ovens, etc. are switched off or unplugged when not in use.



BCEZ's Best Practices on EE & C

Computers are set to auto lock-auto sleep mode



BCEZ's Best Practices on EE & C

OFFICE LIGHTING



BCEZ's Best Practices on Energy Efficiency

Use of daylight is optimized



BCEZ's Best Practices on EE & C

Lights are turned off when not in use and during break time except when official work is being done (**no noon break policy**).



BCEZ's Best Practices on EE & C



BCEZ's Best Practices on EE & C

100% LED lighting in offices and during exhibits



BCEZ's Best Practices on EE & C

PERIMETER LIGHTING



BCEZ's Best Practices on EE & C

LED for perimeter and street lights,
switched on from 6:00 PM to 5:30 AM
(sked may vary as needed)



BCEZ's Best Practices on EE & C

BCEZ joined
Earth Hour



BCEZ's Best Practices on EE & C

ADMINISTRATION BUILDING & ITS PREMISES









Philippine Economic Zone Authority
Sugbo, Cebu Export Zone

**#PEZAtotheCommunity:
Creating Jobs, Livelihood
and Income for the Filipino
in the Countryside**

Celebrating 39 years of partnership

PEZA











IV. Green Initiatives of BCEZ's Locator Enterprises

BCEZ's Locators Green Initiatives

- Energy Efficiency and Conservation Programs
- Use of Low Emission and Energy Efficient Vehicles and Equipment
- Participation in Greening Programs



BCEZ's Locators Green Initiatives



TEXAS INSTRUMENTS

TI (Phils.), Inc. as Finalist in the 2015
US Secretary of State's Award for
Excellence

Category: Environmental Sustainability

Awarded on February 26, 2016



BCEZ's Locators Green Initiatives



TEXAS INSTRUMENTS

*“TIPI set the standard for sustainable architecture in the Phils. By obtaining the country’s first **Leadership in Energy Environmental Design (LEED)** certification.”*

“TIPI also spent \$1.2 Million on water and energy conservation projects including recycling of hazardous and non-hazardous waste, and worked with the Phil. Government to develop and support the Government’s Green Building Code

(Source: Media Note, Office of the Spokesperson, Washington DC).”



BCEZ's Locators Green Initiatives



Leadership in Energy Environmental Design (LEED)

2009: TIPI BAGUIO earned the LEED-NC Silver Certification on its Phase V expansion project. **Philippines' first LEED certified building.**

2010: TIPI's Assembly/Test Facility in **Clark Ecozone**, Philippines was awarded by the US Green Building Council (USGBC) with LEED Gold Certification in 2010. **First of its kind in the Philippines.**



BCEZ's Locators Green Initiatives



TEXAS INSTRUMENTS

**Leadership in
Energy
Environmental
Design (LEED)**



BCEZ's Locators Green Initiatives



TEXAS INSTRUMENTS



#Creating Jobs, Livelihood, and Income for the Filipino in the Countryside

BCEZ's Locators Green Initiatives

BAGUIO AYALA TECHNOHUB – Ranked 39th

during the

2017 Don Emilio Abello Energy Efficiency Awards

Outstanding Award and Outstanding Energy
Managers Award

(Engr. William Z. Santiago)



#Creating Jobs, Livelihood, and Income for the Filipino in the Countryside

BCEZ's Locators Green Initiatives

Typing Media, Inc.'s IT Building (new locator): Green Building



#Creating Jobs, Livelihood, and Income for the Filipino in the Countryside

V. THE WAY FORWARD

The Way Forward

- Green Ecozones

- For existing and new ecozones - Integrating commercial and residential aspects towards renewable energy as source of power
- PEZA is currently working on preparing standards for a green economic zone that is compliant to legal environmental requirements.



The Way Forward

- Upcoming Project on Rewiring and Upgrading the PEZA-BCEZ Admin. Building
- Phase 2 of LED Street and Perimeter Lights



***“Energy Management
is no longer an option, but
should now be a vital component of
every ecozone locator’s business
undertaking in response to the
mounting energy and
environmental challenges
that lie ahead.”***



**CREATING
JOBS, LIVELIHOOD,
INCOME
FOR THE
FILIPINO IN THE
COUNTRYSIDE**



THANK YOU!

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