



# Sangguniang Panlalawigan

BATAAN CAPITOL, BALANGA CITY



EXCERPT FROM THE MINUTES OF THE 82<sup>ND</sup> REGULAR SESSION  
VIA ZOOM MEETING OF THE SANGGUNIANG PANLALAWIGAN OF BATAAN  
HELD AT THE PROVINCE OF BATAAN ON MAY 03, 2021

**PRESENT:**

Hon. Ma. Cristina M. Garcia, Vice Governor and Presiding Officer

**FIRST DISTRICT:**

Hon. Benjamin C. Serrano, Jr., Board Member  
Hon. Jomar L. Gaza J.D., Board Member  
Hon. Reynaldo T. Ibe, Jr., Board Member  
Hon. Godofredo B. Galicia, Jr., M.D., Board Member  
Hon. Maria Khristine G. Dela Fuente, Board Member



**SECOND DISTRICT:**

Hon. Maria Margarita R. Roque, Board Member  
Hon. Manuel N. Beltran, Board Member  
Hon. Edgardo P. Calimbas, Board Member  
Hon. Jose C. Villapando, Sr., Board Member  
Hon. Romano L. Del Rosario, Board Member

Hon. Doroteo M. Austria, Board Member (FABC President)  
Hon. Noel Joseph L. Valdecañas, Board Member (PCL President)  
Hon. Precious D. Manuel, Board Member (SKF President)  
Hon. Rosita N. Sison, Board Member (IPM Representative)

**ABSENT:**

None

**ORDINANCE NO. 06  
Series of 2021**

**AN ORDINANCE PRESCRIBING THE GUIDELINES FOR THE  
UTILIZATION, RECIRCULATION, HAULING AND FINAL DISPOSAL OF  
BIOMASS ASH GENERATED BY THE OPERATION OF BIOMASS POWER  
PLANTS AND OTHER SOURCES WITHIN THE PROVINCE OF BATAAN  
AND PRESCRIBING PENALTIES FOR VIOLATION THEREOF**

**Sponsored by: HON. MARIA MARGARITA R. ROQUE**

**SECTION 1. SHORT TITLE.** This Ordinance shall be known as the "Bio-Ash Management Ordinance" and shall hereinafter be referred to as the Ordinance.

**SECTION 2. DECLARATION OF POLICY.** It is hereby declared the policy of the Provincial Government of Bataan to fully exercise genuine and meaningful autonomy in recognizing and promoting the right to a balanced and healthful ecology in accord with the rhythm and harmony of nature. Specifically, the Provincial Government, including its component Local Government Units (LGUs), shall:

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- a. Ensure the protection of public health and environment;
- b. Promote extended producer responsibility and circular economy;
- c. Prioritize maximum waste reduction and diversion/resource recovery over waste disposal; and
- d. Encourage private sector participation in environmental management, including solid waste management.

SECTION 3. LEGAL BASES. This Ordinance is promulgated by the Provincial Government of Bataan based on its authority, responsibility and mandate as provided for in related laws and regulations, such as, but not limited to, Republic Act No. 7160 (Local Government Code of 1991), Republic Act No. 9003 (Ecological Solid Waste Management Act of 2000), Republic Act No. 8749 (Philippine Clean Air Act of 1999), Republic Act No. 9275 (Philippine Clean Water Act of 2004), and Presidential Decree No. 1586 (Environmental Impact Statement System Law).

SECTION 4. DEFINITION OF TERMS. As used in this Ordinance, the following acronyms, words and phrases shall be defined or construed as follows:

- a. BIOMASS – organic material usually derived from living or recently living organisms such as plants and animals that can be used as substitute for fossil fuels in the production of renewable energy. It includes rice husks, bagasse and other agricultural refuse, Napier grass and other crops that are grown and harvested to provide fuel for Biomass Power Plants.
- b. BIOMASS ASH (OR BIO-ASH) – residue produced after the combustion of biomass.
- c. BIOMASS POWER PLANT - a facility that produces electricity by burning biomass solids in a steam generator that heats water to produce high-pressure steam which then flows through steam turbines that spin an electrical generator to generate electricity.
- d. BIOMASS ASH LANDFILL FACILITY (BLF) – a facility exclusive only for disposal of excess and non-contaminated bio-ash from Biomass power plants.
- e. ENVIRONMENTAL COMPLIANCE CERTIFICATE (ECC) – a document issued by the DENR-EMB after a positive review of an ECC application, certifying that the Proponent has complied with all the requirements of the Environmental Impact Statement (EIS) System and has committed to implement its approved Environmental Management Plan. The ECC also provides guidance to other agencies and to LGUs on EIA (Environmental Impact Assessment) findings and recommendations, which needs to be considered in their respective decision-making process (DENR DAO 2003-30).

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- f. LIMING – a traditional procedure in preparing the soil for planting. It is the application of calcium and magnesium-rich materials to soil to correct or neutralize high levels of acidity in the soil.
- g. MATERIALS RECOVERY FACILITY (MRF) – a solid waste management facility that includes a solid waste transfer station or sorting station, drop-off center, a composting facility, and a recycling facility (RA 9003)
- h. NAPIER GRASS (Pennisetum purpureum, ALSO KNOWN AS ELEPHANT GRASS) – species of perennial tropical grass native to the African grasslands, which is grown locally as feedstock and as biomass fuel.
- i. PG-ENRO – Provincial Government – Environment and Natural Resources Office
- j. PGB – Provincial Government of Bataan
- k. RICE HUSKS (OR RICE HULLS) – hard protective coverings of grains of rice, which are removed from the rice seed as a by-product during the milling process.
- l. SLF – sanitary landfill

SECTION 5. EXTENDED PRODUCER RESPONSIBILITY. Biomass Power Plants and other sources in the Province of Bataan are hereby required to divert or recirculate at least THIRTY PERCENT (30%) BY 2021 to at least FIFTY PERCENT (50%) of their bio-ash by 2025, based on the following diversion and disposal targets:

YEAR	DIVERSION/RECIRCULATION	OUTRIGHT DISPOSAL
2021	30%	70%
2022	35%	65%
2023	40%	60%
2024	45%	55%
2025	50%	50%

SECTION 6. ROLES AND RESPONSIBILITIES OF HAULER. Any individual or entity that shall engage in the hauling of bio-ash shall not enter into a contract or agreement of services with a Biomass Power Plant without first having complied the following prerequisites:

- a. Necessary permits and clearances from the concerned LGU/s and/or national government agency/ies for the current calendar year;

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a.1. All haulers shall secure a Hauling Permit from the PG-ENRO, and shall pay the following fees to the Provincial Treasurer's Office:

Filing Fee:	₱3,000.00
Processing Fee:	₱2,000.00
Total:	₱5,000.00

This permit shall be renewed annually.

- b. An existing contract, agreement, or equivalent instrument with a Bio-ash Disposal Facility duly accredited or approved by the DENR-EMB; and if such facility is located within the Province of Bataan, duly accredited or approved by the Sangguniang Panlalawigan, in addition to the environmental clearance issued by the DENR-EMB.
- c. A demonstrated capability to prevent and/or mitigate any air pollution incident during transport of bio-ash, including but not limited to the availability for its use of trucks with covered dump and which is capable of watering the hauling train on the way to the end-user or disposal facility.
- d. Concurrently, due diligence must be observed by the Biomass Power Plant in selecting a service provider for the hauling of its bio-ash, ensuring that said service provider is compliant with the requirements outlined in Section 6 of this Ordinance.

SECTION 7. ALLOWABLE APPLICATIONS FOR BIO-ASH. Biomass Power Plants and other sources producers shall comply with Section 5 of this Ordinance by initiating or partnering with other stakeholders in implementing projects and activities that utilize bio-ash. The bio-ash may be used as additive for the following purposes:

- a. Composting in plant, barangay or municipal MRFs;
- b. Construction and engineering;
- c. Liming of agricultural or forest soils;
- d. Alternative cover material in city or municipal SLFs;
- e. Research and Development; and
- f. Other uses as may be authorized by the Sangguniang Panlalawigan, following the procedure provided herein below.

PROVIDED, that the bio-ash is not contaminated with any other material or substance, especially toxic or hazardous substance/s.

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PROVIDED FURTHER, that the utilization or application of bio-ash by the end-user shall be in an ecologically sound manner, and shall be in accordance with the following usage criteria:

#### A. COMPOSTING

1. Addition of TWO PERCENT (2%) to FIVE PERCENT (5%) bio-ash within the composting process (IEA Bioenergy, 2018).
2. pH must be, or in the range from SIX (6) to EIGHT (8), and water holding capacity of SIXTY EIGHT PERCENT (68%) to SIXTY NINE PERCENT (69%).
3. If site (temperature) conditions are, or are forecast to be, hot the moisture content of the bio-ash must maintain from FIFTY PERCENT (50%) to SIXTY PERCENT (60%), to avoid dehydration, hence it will slow down the composting process.

#### B. CONSTRUCTION AND ENGINEERING

1. Bio-ash can be used as partial replacement for ordinary Portland cement (OPC) or as supplementary cementitious material (SMC) in production of dense and hollow bricks.
2. Production must follow these mixture:
  - a. Bio-ash must be milled and sieved to reduce size to 0.020 mm, hence moisture content must be TEN PERCENT (10%) and bulk density of SIX HUNDRED TEN GRAMS PER CUBIC CENTIMETER (610g/cm<sup>3</sup>).
  - b. It should be wetted for FIFTEEN HOURS (15 hrs), mixed with Calcium hydroxide (Ca(OH)<sub>2</sub>) in a ONE IS TO ONE RATIO (1:1) and molded in rectangular mold using mechanical and hydraulic press.

#### C. LIMING

1. Bio-ash can be applied as corrective for soil acidity, ONE HUNDRED FORTY MILLIGRAMS PER HECTARE (140 Mg ha<sup>-1</sup>) must be applied to a full depth of 0.10 to 0.20 meters given calm site (weather conditions)
2. Soil pH must be maintained from 6 to 7 after nine to fifteen days upon application to avoid saturation.

#### D. LANDFILLING

1. Bio-ash can be applied as alternative daily cover material, in lieu of soil, to a full depth of SIX INCHES (6 in) given calm site (weather) conditions.

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2. If site (weather) conditions are, or are forecast to be, windy the bio-ash must either be:
  - a. Mixed with soil at a ratio of FIFTY PERCENT (50%) soil with FIFTY PERCENT (50%) bio-ash prior to application on the working face if it can become airborne or exhibits dust like properties; or
  - b. Placed on the working face to a minimum depth of THREE INCHES (3 in) and then covered with soil a minimum depth of THREE INCHES (3 in) if it can become airborne or exhibits dust like properties.
3. During the use of bio-ash as alternative cover material, shall be applied once per week, unless otherwise approved by the SLF Management.
4. Bio-ash may not be used for intermediate cover; it can become airborne or exhibit dust like properties.
5. The bio-ash must be sourced from within the approved service area of the landfill facility. If needed, the SLF Management shall coordinate with the source Biomass Power Plant for the establishment of a service and staging area for bio-ash, charged to the Plant's Environmental Guarantee Fund (EGF) or Environmental Management Fund (EMF), as afforded by its ECC.

#### **E. RESEARCH AND DEVELOPMENT (R&D)**

1. Bio-ash can be used by research and academic institutions, free of charge, as a material in the conduct of their respective R&D efforts, PROVIDED, that the handling of bio-ash during such endeavor shall be in accordance with existing environmental, health and safety guidelines and protocols.
2. The Provincial Government of Bataan shall be informed of the findings of research that utilized bio-ash.

#### **F. OTHER USES**

1. The end user of the bio-ash shall make a formal request to the PG-ENRO, copy furnished the concerned city/municipal Sanggunian and the Sangguniang Panlalawigan, for a resolution authorizing the proposed usage or application of bio-ash from a specified Biomass Power Plant.

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2. A Work Plan shall be submitted as attachment to the request, for technical review of the PG-ENRO, City/Municipal ENRO (or equivalent office in charge), and the DENR.
3. The City/Municipal ENRO, upon concurrence with DENR and PG-ENRO, shall submit to the Sangguniang Bayan/Panlungsod a letter of recommendation, should the proposed Work Plan be found to be ecologically sound. Likewise, the PG-ENRO, upon concurrence with the DENR and City/Municipal ENRO, shall submit to the Sangguniang Panlalawigan a letter of recommendation regarding the matter.
4. Subject to prior proceedings, the concerned Sangguniang Bayan/Panlungsod shall issue a resolution endorsing the proposed bio-ash application. The Sanggunian Resolution shall be forwarded to the Sangguniang Panlalawigan as a prerequisite for deliberation.
5. Subject to prior proceedings, the Sangguniang Panlalawigan shall issue a resolution authorizing the end user to conduct the proposed usage or application of bio-ash.
6. Bio-ash application or usage shall be executed by the end user based on the approved Work Plan, as authorized by the Sangguniang Panlalawigan.

SECTION 8. All trucks or motor vehicles used in the hauling of bio-ash shall be properly sealed to prevent spillage or fugitive emission of bio-ash during transit.

SECTION 9. FINAL DISPOSAL OF BIO-ASH. Biomass Power Plants and other sources are hereby prohibited from disposing of their bio-ash, UNLESS OTHERWISE during the following instances:

- (a) Excess bio-ash after maximum diversion, considering applicable targets in Section 5 of this Ordinance, have been achieved; OR
- (b) Contaminated bio-ash

Excess non-contaminated bio-ash shall be disposed of only in any designated Bio-Ash Landfill Facility (BLF) within or outside the Province of Bataan. PROVIDED, that disposal at the LGU SLF or BLF within the Province of Bataan is duly bound by an agreement or equivalent document between the Biomass Power Plant and the concerned BLF Management.

PROVIDED FURTHER, that the Biomass Power Plant shall provide the concerned BLF Management proof of suitability of the bio-ash for disposal, such as, but not limited to, laboratory analysis results with applicable soil quality standards of the DENR or DA; and/or certification from the DENR-EMB.

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PROVIDED FURTHER, that the designation of all parcels of land as BLF and its corresponding reclassification of land use to industrial use, as may be deemed necessary, shall be examined and approved by the Sangguniang Panlalawigan. The approval of the Sangguniang Panlalawigan, through a Resolution, shall be a prerequisite of the BLF project proponent prior to any DENR permit or approval. All pending applications for BLF within the Province of Bataan, presently filed with the DENR, shall first be redirected to this Sangguniang Panlalawigan for consideration and approval.

Contaminated bio-ash shall NOT at any time be disposed of at any disposal facility within the Province of Bataan. Biomass Power Plants and other sources shall contract the services of an accredited Treatment and Disposal (TSD) facility for the hauling, treatment, and final disposal of their contaminated bio-ash.

Considering current bio-ash generation of Biomass Power Plants and constraints in land use and land availability, any bio-ash landfill facility to be constructed in the province shall be limited to a Category 1 sanitary landfill, with general design parameters compliant with DENR Administrative Order No. 10, Series of 2006, otherwise known as the "Guidelines on the Categorized Final Disposal Facilities (Sanitary Landfills)".

SECTION 10. REPORTORIAL REQUIREMENTS. All Biomass Power Plants and other sources within the Province of Bataan shall submit a monthly report reflecting the daily volume in KILOGRAMS of biomass obtained (input) as well as the daily volume in KILOGRAMS of hauled, recirculated, and disposed bio-ash. The said report shall be submitted to the PG-ENRO on or before the second Friday of the succeeding month.

All haulers of bio-ash shall implement and maintain a manifest system for proper recording and tracking of bio-ash transported from the Biomass Power Plant to an end-user and/or bio-ash disposal facility. Copies of the manifest for all vehicles used in hauling shall be provided to the Biomass Power Plant and the PG-ENRO. A copy of the manifest shall also be kept with the hauling vehicle at all times, to be presented during an inspection by the Task Force "Kasinupan".

All end users utilizing bio-ash within the Province of Bataan shall also submit a monthly report reflecting the source of bio-ash, the location of project site, the total volume in KILOGRAMS of bio-ash obtained from the source, and photo documentation of bio-ash application. The said report shall be submitted to the PG-ENRO on or before the second Friday of the succeeding month.

SECTION 11. Creation of Task Force "Kasinupan" and its Composition. There is hereby created Task Force "Kasinupan" to be composed of the following:

- Chairperson : Provincial Government Environment and Natural Resources Officer
- Vice Chairperson : Provincial Health Officer
- Members : a. Provincial Engineer  
b.General Manager, Metro Bataan Development Authority

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- c. Representative, PNP Bataan PPO
- d. Representative, DENR Bataan
- e. Representatives from the component city and eleven (11) municipalities of the Province of Bataan
- f. Representative, private sector
- g. Representative, academe

The Task Force shall have the following powers, duties, and functions:

- a. Conduct periodic inspection of all Biomass Power Plants, other bio-ash sources and designated bio-ash disposal facilities to determine their compliance with this ordinance and other existing laws, ordinances, rules and regulations pertaining to environment protection;
- b. Apprehend or cause the apprehension of persons caught in the act of violating such laws, ordinances, rules and regulations and recommend the filing of proper legal action against the suspects;
- c. Recommend to the Office of the Provincial Governor the imposition of sanctions against, or the closure or suspension of operations, of establishments that have been found in violation of the provisions of such laws, ordinances, rules and regulations.
- d. Recommend to the Mayor of the respective municipality of the caught violator for revocation, or cancellation of any issued permits.
- e. Recommend to the Sangguniang Panlalawigan appropriate legislative measures that strengthen the local government campaign against environmental pollution;
- f. Determine the feasibility of all applications for bio-ash disposal facilities and recommend to the Provincial Governor and the Sangguniang Panlalawigan the comprehensive effect of the applied facility to all sectors of the community, such findings shall be recommendatory in the approval of the applied facility.

The PG-ENRO shall serve as the secretariat of the Task Force.

Municipal and City local governments are also encouraged to create their own local Task Force "Kasinupan" in order to perform the responsibilities of the Provincial Task Force in their respective municipality.

SECTION 12. UPDATING OF GUIDELINES. Every year or as often as may be necessary, the PG-ENRO is hereby tasked to review and update the guidelines stipulated in Section 5 hereof or any other section of this Ordinance, and in consultation with concerned technical experts, recommend to the Sangguniang Panlalawigan any revision, update or amendment to the Ordinance.

SECTION 13. FINES AND PENALTIES. Violation of the provisions of this ordinance shall be penalized as follows:

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(a) Any Biomass Power Plant found in violation of the provisions of this Ordinance:

- |  |   |  |
|--|---|--|
| 1 <sup>st</sup> OFFENSE                      | : | Fine of FIVE THOUSAND PESOS (P5,000.00)  |
| 2 <sup>nd</sup> AND SUCCEEDING :<br>OFFENSES | : | Fine of FIVE THOUSAND PESOS (P5,000.00) and SUSPENSION of Operations for not more than THIRTY (30) DAYS. |

A Biomass Power Plant that shall be penalized for more than four (4) times shall be recommended by the Provincial Government to the Department of Energy (DOE) for closure, and or to the concerned city/municipality for revocation of business permit and other issued LGU permits.

(b) Any hauler found in violation of the provisions of this Ordinance:

- |  |   |   |
|--|---|---|
| 1 <sup>st</sup> OFFENSE                      | : | Fine of FIVE THOUSAND PESOS (P5,000.00)   |
| 2 <sup>nd</sup> AND SUCCEEDING :<br>OFFENSES | : | Fine of FIVE THOUSAND PESOS (P5,000.00) and IMPOUNDING/ CONFISCATION of the truck/vehicle |

(c) Any end-user found in violation of the provisions of this Ordinance:

- |                         |   |  |
|-------------------------|---|--|
| 1 <sup>st</sup> OFFENSE | : | Fine of FIVE THOUSAND PESOS (P5,000.00)  |
| 2 <sup>nd</sup> OFFENSE | : | Fine of FIVE THOUSAND PESOS (P5,000.00) and SUSPENSION of operations for not more than THIRTY (30) DAYS        |
| 3 <sup>rd</sup> OFFENSE | : | Fine of FIVE THOUSAND PESOS (P5,000.00) and STOPPAGE of operations, including CLOSURE of facility/ies, if any. |

(d) Any public official or employee found in violation of this Ordinance under any related capacity shall be charged with Administrative Sanctions under the Local Government Code and a Criminal Case under the Revised Penal Code if acting in conspiracy with violators.

The above penalties are without prejudice to any criminal liability that may be incurred by the offender under Republic Act No. 9003 (Ecological Solid Waste Management Act of 2000), Republic Act No. 8749 (Philippine Clean Air Act of 1999), Republic Act No. 9275 (Philippine Clean Water Act of 2004) and the Revised Penal Code.

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SECTION 14. REPEALING CLAUSE. All Ordinances or Resolutions inconsistent with the provisions of this Ordinance are hereby repealed or modified accordingly.

SECTION 15. SEPARABILITY CLAUSE. Should any provision of this Ordinance or any part thereof be declared invalid, the other provisions, insofar as they are separable from the invalid ones, shall remain in full force and effect.

SECTION 16. EFFECTIVITY CLAUSE. The Ordinance shall take effect upon approval and publication as required by law.

ANNEXES:

List of References;

International Energy Agency Bioenery, 2018

Faculty of Chemical and Natural Resource Engineering, Universiti Malaysia Pahang, Lebuhraya Tun Razak 26300, Gambang, Pahang, Malaysia, 2018

Department of Chemical, Fibre and Environmental Technology, Federal Institute of Industrial Research Oshodi, Lagos Nigeria, 2015

Federal University of Pelotas, 2014

DAO 2006-10

APPROVED UNANIMOUSLY".

MA. LILIOSA B. OCONER  
Assistant Secretary to the SP

BENJAMIN C. SERRANO, JR.  
Board Member

JOMAR L. GAZA J.D.  
Board Member

REYNALDO T. IBE, JR.  
Board Member

GODOFREDO B. GALICIA, JR., M.D.  
Board Member

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ROMANO L. DEL ROSARIO  
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DOROTEO M. AUSTRIA  
Board Member  
(FABC President)

  
NOEL JOSEPH L. VALDECAÑAS  
Board Member  
(PCL President)

  
PRECIOUS D. MANUEL  
Board Member  
(SKF President)


  
ROSITA N. SISON  
Board Member  
(IPM Representative)

ATTESTED:

  
MA. CRISTINA M. GARCIA  
Vice Governor  
(Presiding Officer)

APPROVED:



  
ALBERT S. GARCIA  
Provincial Governor  
Date: 05/14/2021



