



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU

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MEMORANDUM CIRCULAR # 003

Series of 2006

**FOR : All Regional Directors, EMB
All Heads of EIA Unit
All Concerned**

FROM : The Director

SUBJECT : IEE Checklist for Wind Energy Projects

Consistent with the Department thrust to further streamline the requirements and procedures of the Environmental Impact Statement System as provided for in the DENR Administrative Order No. 30 Series of 2003 and Administrative Order No. 42 Series of 2002 and in order to further simplify the requirements for the renewable energy projects particularly wind energy projects; the IEE Checklist for **wind energy projects with rated capacity of 5MW to 100MW is hereby adopted.**

The EMB Regional Office shall make available copies of the IEE Checklist to the proponents and upon submission of the accomplished checklist by the proponents, EMB Regional Office shall review, evaluate and make decision within thirty (30) working days on the submitted documents.

This Memorandum Circular shall take effect immediately.


FRANCISCO S. BRAVO

cc: Office of the Secretary
Undersecretary for Environment and Forestry
Undersecretary for Field Operations

Office of the Secretary
Department of Energy

Protect the environment... Protect life...

CHECKLIST OF REQUIREMENTS FOR WIND ENERGY PROJECTS

1. Duly Accomplished Project Information/IEE Checklist Report to include study on the movements of migratory birds in the area and duly notarized accountability statement of the project proponent.
2. Duly accomplished Environmental Management Plan to include contingency management plan and safety program and establishment of buffer zones from the project area.
3. SEC Registration or DOE Certification of the proponent
4. Zoning Certification from HLURB and/or MPDC, certifying that project conforms with the zoning of the locality.
5. Colored Pictures (panoramic view of the project site with captions.
6. Certified copy of the TCT or OCT or proof of ownership of the applied area.
7. Environmental Liability Insurance Policy
8. Undertaking to Engage a Third Party Environmental Auditor
9. * PAMB Clearance if the project is located in a protected area

* if located within the NIPAS Area.



**INITIAL ENVIRONMENTAL EXAMINATION (IEE)
CHECKLIST REPORT FOR WIND ENERGY PROJECTS
LIMITS (5MW TO 100MW RATED CAPACITY)**

A. GENERAL INFORMATION

1. Project Name: _____
2. Project Location: _____
(Complete address street/sitio/ barangay,
city/municipality, province)
3. Proponent: _____
4. Address: _____
(Complete address street/barangay, city/municipality,
province)
5. Telephone No.: _____
6. Fax No.: _____
7. Project Ownership: _____
8. Project Cost: _____
9. Project Duration: _____
10. Project Area (hectares): _____
11. Project Objective: _____

B. PROJECT DESCRIPTION

1. Project Components _____

2. Land Ownership and Status of Land Ownership

3. How Do You Describe the General Location of the Project?

4. Project Specifications:

4.1 Specifications of Wind Turbines

Item	Specification	Unit
Nominal output		kilo watts
Type of generator		-
Power regulation		-
Cut in wind speed*		meters per second
Cut out wind speed*		meters per second
Hub height*		meters
Blade/rotor diameter		meters
Type of blade/rotor		-
Type of tower		-
Total number of turbine towers		units
Distance between towers		meters
Voltage of substation		kilo volts
Area of control center		square meters
Total project area		Hectares
Project Duration		Years

*Definitions: Cut in wind speed – the minimum wind speed to start generation
 Cut out wind speed – the maximum wind speed to cut out generation
 Hub height – the height from the ground level to the center of the blade
 Tower height - the height from the ground level to the top of the tower
 Rotor – solid steel hub with three (3) rotor blades

4.2 Control Center/Office _____

5. Land use

Land Use	Total Area Within the Project Boundary (hectares)
1. Agricultural	
2. Industrial	
3. Commercial	
4. Residential	
5. Tourism	
6. Forest Land	
7. Open Spaces	
8. Institutional	
9. Others (pasture, grassland, shrub land)	
Total Area (hectares)	



Plate 1. Northern portion of the project site

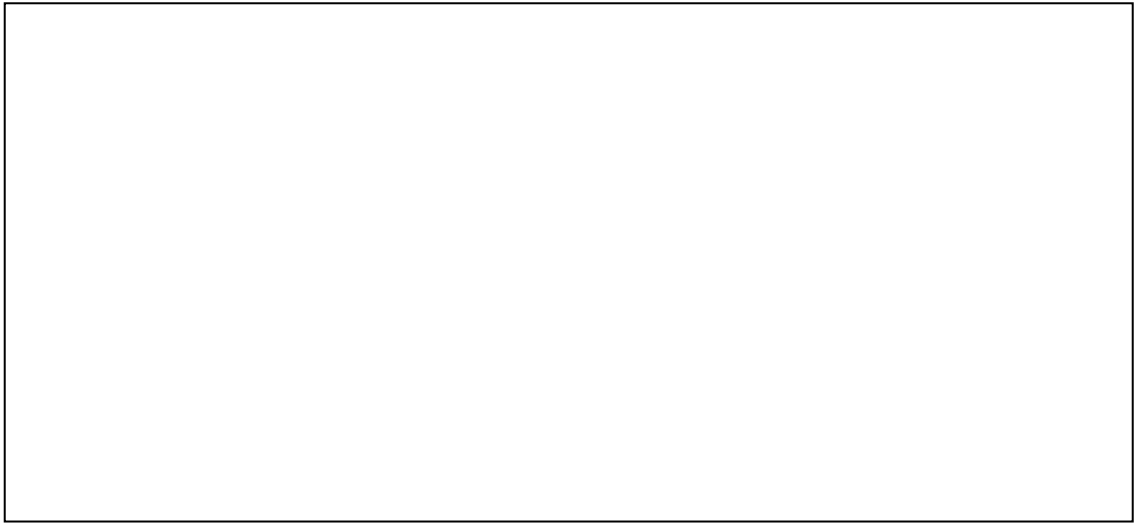


Plate 2. Southern portion of the project area

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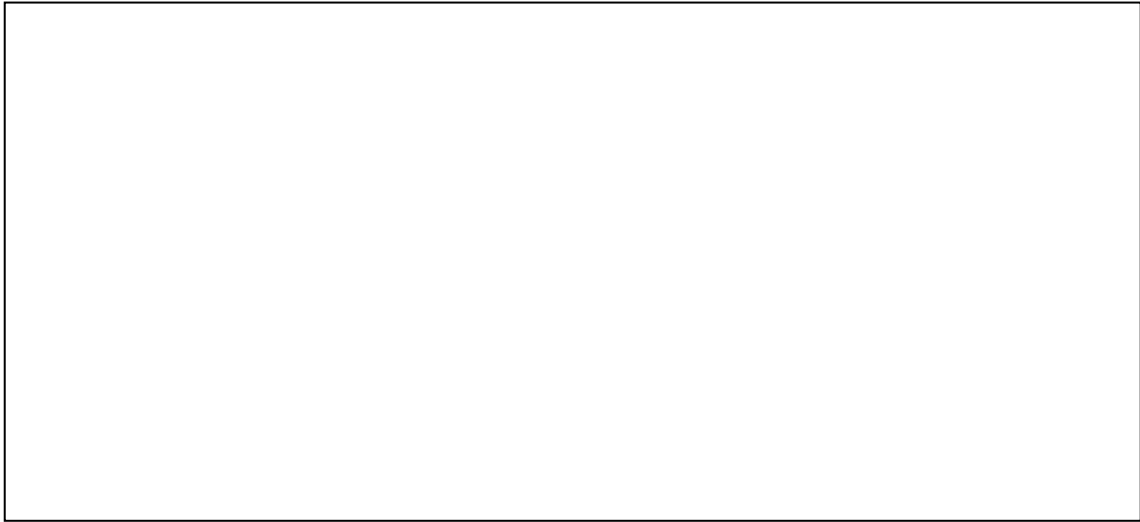


Plate 3. Eastern portion of the project area

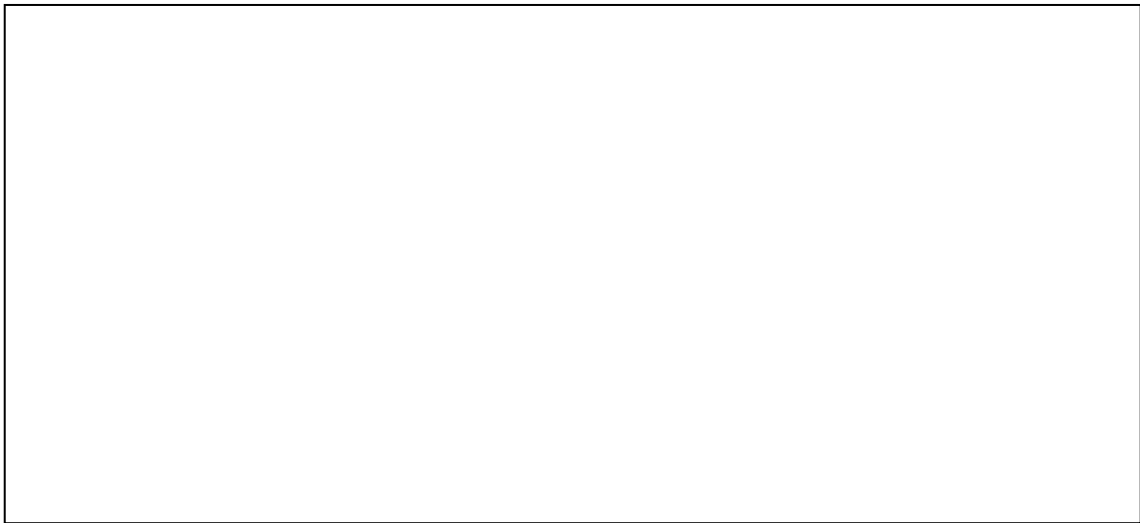


Plate 4. Western view of the project site

6. Barangays Where Turbines Will Be Installed

Barangay	Municipality	Province	Total Area

7. Manpower and Employment

How many people will be employed by the project?

Pre-construction period _____

Construction period _____

Operation and maintenance _____

8. Construction Schedule (*Attach schedule of development activities from pre-construction, construction to the operation phase in a Gantt Chart*)



C. DESCRIPTION OF EXISTING ENVIRONMENT

1. Physical Environment

Components/Parameters	Yes	No	Remarks
1. What is the elevation range of the area (masl)? Slope and topography of the area			
2. What is the general geology of the area?			
3. Are there indications of land sliding in the area?			
4. Are there occurrences of flooding downstream of the site?			
5. Soil type of the area			
6. Does the area have sandy soil? Clayey soil? Sandy loam soil?			
7. Is there any indication of excessive soil erosion occurring in the area? If yes, what type of erosion? <ul style="list-style-type: none"> • Natural • Man-made (specify sources of erosion such as kaingin, logging etc.) Generally categorize rate of erosion based on observation <ul style="list-style-type: none"> • No apparent erosion • Slight • Moderate • Severe 			
8. Does the area traverse part of the drainage area of a river system(s)?			

* Questions not answerable by yes or no are addressed in the remarks.



Components/Parameters	Yes	No	Remarks
9. What river system(s) or water bodies does the site affect? Please enumerate them under remarks.			
10. Are there natural drainage ways/creeks along the area that drain towards communities downstream?			
11. Is the area frequently visited by tropical cyclones?			
12. When was the last typhoon, which visited the area?			
13. Average number of typhoons per year			
14. Is there a record of tornadoes /twisters which occurred in the area?			
15. What is the nearest earthquake, fault zone or volcano, etc. in the area? <ul style="list-style-type: none"> • Identify name of the zone: • Distance: 			
16. Had there been any incidents such as lightning strikes at or near the site?			

* Questions not answerable by yes or no are addressed in the remarks.



What are the present uses of the water bodies being drained/affected by the project site?

Uses	Put check (✓)	Remarks
1. Bathing		
2. Fishing		
3. Recreation		
4. Washing		
5. Source of Drinking		
6. Irrigation		
7. Others (please specify)		

2. Biological Environment

Components/Parameters	Yes	No	Remarks
1. Are there existing trees and other types of vegetation in the project area? If yes, indicate the forest type/vegetation.			
2. Are there birds and other forms of wildlife found in the area?			
3. Are there fishery resources in the water bodies found near or in the project area?			
4. Is the area in a watershed or forest reservation area? If near only, how near?			
5. If across, indicate name of the watershed or forest reservation area.			

What are the existing forest resources in the project area that are important to the community?

Forest Resource	Check if Present	Remarks
Timber		
Fuel Wood		
Non-timber Products		
Food Plants		
Medicinal Plants		
Wild Animals		
Minerals		
Others (specify)		

3. Socio-Cultural and Economic Environment

III. Socio-Cultural and Economic Environment			
Components/Parameters	Yes	No	Remarks
1. Are there existing settlements in the project?			
If yes, how many households or families? How many are legitimate landowners? How many are tenants? How many are caretakers? How many are squatters?			
2. What is the total population of the barangays covered by the project?			
3. What is the average family size?			
4. How many of the houses are made of concrete? Made of wood? Made of concrete and wood? Made of brick? Made of adobe? Others: light houses, sheds			
5. What are the sources of livelihood within the barangay? (Brgy. Caunayan and Balaoi) Livelihood type: Farming Fishing Others: Employees Barbers/Drivers/etc Professionals (doctors, engineers, accountants, etc.)			
6. How many of the total population have reached: Elementary level? High school level? College level? Degree holders?			
7. What are the dialects spoken in the area? Ilocano Tagalog Isneg (Apayao) Cebuano Other dialects (Please indicate _____)			
8. Are there ancestral lands or indigenous people communities in the area?			

If yes, please indicate: _____			
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* Questions not answerable by yes or no are addressed in the remarks.

9. What are the leading illnesses in the area?

Leading causes	Number	Percent (%)

10. What are the leading causes of mortality in the area?

Leading causes	Number	Percent

11. Are there other local organizations in the area?

If yes, please list down these organized groups e.g., associations, cooperatives, etc. below

Name of Organizations

12. Are there other social infrastructures in the barangays? ____

If yes, what are these social infrastructures?

Put Check (✓)	Schools	Put Check (✓)	Health Centers/Clinics
	Roads		Communications (Radio, TV, mail, newspaper)
	Police		Community Center

	Station/Outpost		
	Hospitals		Transportation
	Churches/Chapels		Others, repeater station, basketball court

D. IMPACT ASSESSMENT AND MITIGATION

1. Pre-construction/Construction Period

Project Activities Affecting the Physical Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
1. Will there be land clearing? If yes, what is the total area to be cleared?				
2. Will there be stockpiling of soil, sand and gravel materials in the project area?				
3. Will there be drillings, hammering, and boring activities?				
4. Will there be earthmoving activities e.g. excavation works, cut and fill, etc.? If yes, how deep is the excavation and how much is the estimated volume of cut and fill? Average depth of excavation:				
5. Will there be any slope modifications or ground leveling to be done?				
6. Will temporary quarters or barracks and a field office be provided for construction workers in the project site?				
7. Will there be topsoil removal and replacement? If yes, how much of the removed topsoil will be replaced? If partial only, where will the rest of the topsoil go? If no, what will happen to the excavated topsoil?				
8. Will there be demolition of existing structures? If yes, what types of structures will be demolished? Type of structures:				

<p>9. Are you constructing an access roads going to the site? If yes, what type of access road?</p> <p><input type="checkbox"/> All-weather road <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt</p> <p>Length (m) Width (m)</p>				

Project Activities Affecting the Biological Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
1. Will there be vegetation clearing?				
<p>2. Will trees be affected (e.g., cut down or removed) during the clearing? If yes, how many and what are these species of trees?</p> <p>Number of trees: Species of trees:</p>				
3. Will the project encroach into precious ecological areas (e.g., forested zones, watershed areas)?				
4. Will clearing activities affect any rare, threatened or endangered plant or animal species?				

Project Activities Affecting the Socio-cultural Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
1. Will there be settlements to be affected? If yes, how many households will be affected? Total Number of families/households? How will they be handled? Payment of property owners Relocation site to be provided Permanent relocation site to be established Eviction without compensation Others, please specify.				
2. Will the project provide reasonable payment terms to the affected settlements?				
3. Will there be locals to be hired during the construction?				
4. Are there existing public trails or routes (regularly used) that traverse the property?				
5. Will the public or local community still have access to the property in terms of passing through or entering it to reach their house or residence?				
6. Will there be increase in economic activity in the area or rise in associated projects?				

2. Operation and Maintenance Period

Project Activities Affecting the Socio-cultural Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
7. Will the project cause an increase in traffic or disrupt traffic or disrupt traffic in major routes due to entry or exit of construction equipment?				
8. Are there prevailing peace and order problems in the site which can affect the project?				
9. Will the project destroy/impose hazards to historical/cultural monuments?				

Project Activities Affecting the Physical Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
1. Will the project create a significant decrease in the aesthetic value of the area?				
2. Are there areas prone to lightning strikes?				
3. Does the project have significant noise emissions?				

Project Activities Affecting the Biological Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
1. Does the design take into account hazards to wildlife due to rotation of wind turbines blades?				
2. Does the design take into account possible blockade of wildlife passageways?				

Project Activities Affecting the Socio-cultural Environment	Yes	No	Impact Description	Mitigation/Enhancement Measures
1. Will the project create interference with other utilities? If yes, what are these utilities?				
2. Will the project create a significant increase in the existing population in the area?				
3. Will the prevailing land value in the area increase with the project?				
4. Does the design take into account hazards to humans due to accidental failure of the wind turbines?				

5. Is there a team formed for the proper responsibilities in repairing damaged poles/towers resulting from natural (typhoon, earthquake) or man-made calamities?				
6. Will there be an increase in economic activity or rise in associated projects?				

E. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

ENVIRONMENTAL ATTRIBUTES/PROJECT ACTIVITIES (Identify project activities)	IMPACT DESCRIPTION	Mitigating / Enhancement Measures/Plans	Cost of Mitigation/Enhancement	Responsible Agency/Org	Schedule
PRE-CONSTRUCTION / CONSTRUCTION PHASE					
OPERATION PHASE					
ABANDONEMENT / REHABILITATION PHASE					

F. ENVIRONMENTAL MONITORING PLAN (EmoP)

PARAMETER	LOCATION	FREQUENCY OF SAMPLING	METHODOLOGY	APPLICABLE STANDARDS	RESPONSIBLE PARTY	ESTIMATED COST
AIR QUALITY						
WATER QUALITY						
SOLID WASTE						
TOXIC AND HAZARDOUS WASTE						



G. PROPONENT'S COMMITMENTS

I/We, am/are committing to

1. Comply with the following:

- PD 984 *Pollution Control Law*
- PD 1586 *Philippine Environmental Impact Statement System*
- RA 6969 *Toxic and Hazardous Waste Act of 1990*
- RA 8749 *Clean Air Act of 1999*
- RA 9003 *Ecological and Solid Waste Management Act of 2000*
- RA 9275 *Clean Water Act of 2004*

-The implementing rules and regulations of the above-cited laws and
-Other applicable environmental rules and regulations

2. Comply with all mitigation/enhancement measures identified in this Checklist;
3. Abide and conform to the prescribed rules and specifications for power transmission lines as contained in the Electrical Code of the Philippines
4. Construct, operate and maintain well-designed wind turbines and other related structures
5. Establish adequate buffer zones from the project area
6. Comply with all stipulations indicated in any agreement forged with private or public authorities
7. Report to proper government authorities any illegal forest activities that may be present or happening in the project area
8. Immediately replace/ rehabilitate/ repair damaged structures/lines resulting from natural or man-made calamities
9. Organize and conduct information, education and communication (IEC) activities on safety and potential hazards of the project
10. Properly brief or orient the proponent's staff about the ECC conditions, commitments and agreements made about the project
11. Apply for permits from the DENR-EMB for the operation of emission and effluent sources
12. Designate a Pollution Control Officer (PCO) to handle the environmental management programs
13. Submit regular environmental monitoring reports to DENR-EMB RO
14. Strictly implement a contingency management plan and safety program;

Signature over Printed Name of the Managing Head



A. LIST OF ANNEXES

Title or Description	Put a check (✓) mark
1. Location Map	
2. Vicinity Map	
3. Design and Layout of WTGs	
4. Layout of Power Output	
5. Floor Plan of Operations and Maintenance Building	
6. Land Use Map	
7. Estimated Manpower Requirements	
8. Gantt Chart (Schedule of Activities)	
9. Slope Map	
10. Geological Map/Geological Fault Map	
11. Flood prone Map	
12. Soil Map	
13. Erosion Map	
14. Tropical cyclone Map	
15. Initial inventory of Trees and Other Important Vegetation	
16. Initial List of Birds Found	
17. Photocopies of Agreements/Right-of-Way Grants or Similar Instruments	
18. Photocopies of TCT/OCT/CLT, etc. (S/S only)	
19. Electronic copy of the IEE Checklist	
20. Two (2) copies of the IEE Checklist	
21. Payment of filing fees with the DENR-EMB Regional Office 4,000 for new projects and P 3,000 for expansion projects	



ACCOUNTABILITY STATEMENT OF THE PROPONENT

This is to certify that all the information and commitments in the Initial Environmental Examination (IEE) Checklist are true, accurate and complete. Should I/we learn of any information, which would make the IEE Checklist inaccurate, I/we shall bring said information to the attention of the DENR –EMB Regional Office concerned.

We hereby bind ourselves jointly and solidarily to any penalty that may be imposed arising from any misrepresentation or failure to state material information in this IEE Report.

It witness whereof, we hereby set our hands this _____ day of _____ at _____.

Project Proponent/Managing Head

Title/Designation

ACKNOWLEDGEMENT

BEFORE ME this _____ day of _____, 20_____
at _____, personally appeared _____
with Community Tax Certificate No. _____ issued on _____ at _____
_____ in his/her capacity as _____

_____ of _____ and acknowledged to me that this IEE Report Checklist is his/her voluntary act and deed, of the entity he/she represents. This document, which consists of _____ pages, including the page on which this acknowledgement is written is an Initial Environmental Examination (IEE) Report Checklist.

Witness my hand and seal on the place and date above written.

Notary Public

Doc No. _____
Page No. _____
Book No. _____
Series of _____



ACCOUNTABILITY STATEMENT OF THE IEE PREPARER

This is to certify that all the information and commitments in the Initial Environmental Examination (IEE) Checklist are true, accurate and complete. Should I/we learn of any information, which would make the IEE Checklist inaccurate, I/we shall bring said information to the attention of the DENR Regional Office concerned.

We hereby bind ourselves jointly and solidarily to any penalty that may be imposed arising from any misrepresentation or failure to state material information in this IEE Report.

It witness whereof, we hereby set our hands this _____ day of _____ at _____.

IEE Preparer

Title/Designation

ACKNOWLEDGEMENT

BEFORE ME this _____ day of _____, 20_____
at _____, personally appeared _____
with Community Tax Certificate No. _____ issued on _____ at
_____ in his/her capacity as _____ of
_____ and acknowledged to me that
this IEE Checklist is his/her voluntary act and deed, of the entity he/she
represents. This document, which consists of _____ pages,
including the page on which this acknowledgement is written is an Initial
Environmental Examination (IEE) Checklist.

Witness my hand and seal on the place and date above written.

Notary Public

Doc No. _____
Page No. _____
Book No. _____
Series of _____
