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Annex 1 ODA declarations

SECTION A. Project Title

InfraVest Guanyi Wind Farm Project
InfraVest Hsinwu Wind Farm Project

SECTION B. Project description

InfraVest Guanyin Windfarm Project – Taiwan

The project involves the development of a 43.7 MW onshore wind farm in Guanyin township, Taoyuan County in Taiwan. The project is constructed and operated by InfraVest GmbH., and consists of 19 wind turbines each with a capacity of 2.3MW. The 19 turbines of type Enercon E70 are installed at an altitude of 64m hub height, with a diameter of 71m. The project is expected to generate 142,462 MWh/year which is delivered to the national grid.

Taipower, the national electricity utility guarantees to purchase the electricity at €0.043/kWh for 15 years.

The electricity produced will be exported to the regional state electricity authority Taipower. Therefore the emission reductions from the project activity will come from the avoidance of carbon dioxide emissions from fossil fuel use at the national electricity grid. The annual emission reductions are estimated as 114,000 tCO₂e/year.

InfraVest Hsinwu Windfarm Project – Taiwan

The project involves the development of a 34.5 MW onshore wind farm in Hsinwu Township, Taoyuan, Taiwan. The project is constructed and operated by InfraVest GmbH., and consists of 15 wind turbines each with a capacity of 2.3MW. The 15 turbines of type Enercon E70 are installed at an altitude of 64m hub height, with a diameter of 71m. The project is expected to generate 112,470 MWh/year which is delivered to the national grid.

The electricity produced will be exported to the regional state electricity authority, Taipower. Therefore, the emission reductions from the project activity will come from the avoidance of carbon dioxide emissions from fossil fuel used at the national electricity grid. The annual emission reductions are estimated as 90,000 tCO₂e/year.







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SECTION C. Proof of project eligibility

C.1. Scale of the Project

[See Toolkit 1.2.a]

Please tick where applicable:

Project Type	Large	Small
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>

C.2. Host Country

Taiwan, Republic of China

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C.3. Project Type

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does your project activity classify as an End-use Energy Efficiency Improvement project?	<input type="checkbox"/>	<input type="checkbox"/>

Please specify your project type:

Grid-connected wind power generation.

Pre Announcement	Yes	No
Was your project previously announced?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Explain your statement on pre announcement		

C.4. Greenhouse gas

[See Toolkit 1.2.d]

Greenhouse Gas	
Carbon dioxide	<input checked="" type="checkbox"/>
Methane	<input type="checkbox"/>
Nitrous oxide	<input type="checkbox"/>

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C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type			
Regular			<input checked="" type="checkbox"/>

Pre-feasibility assessment	Retro-active projects (T.2.5.1)	Preliminary evaluation (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

[See Toolkit 1.6]

	Coordinates
Latitude	25° 01' 41" N
Longitude	121° 03' 18" W



Explain given coordinates

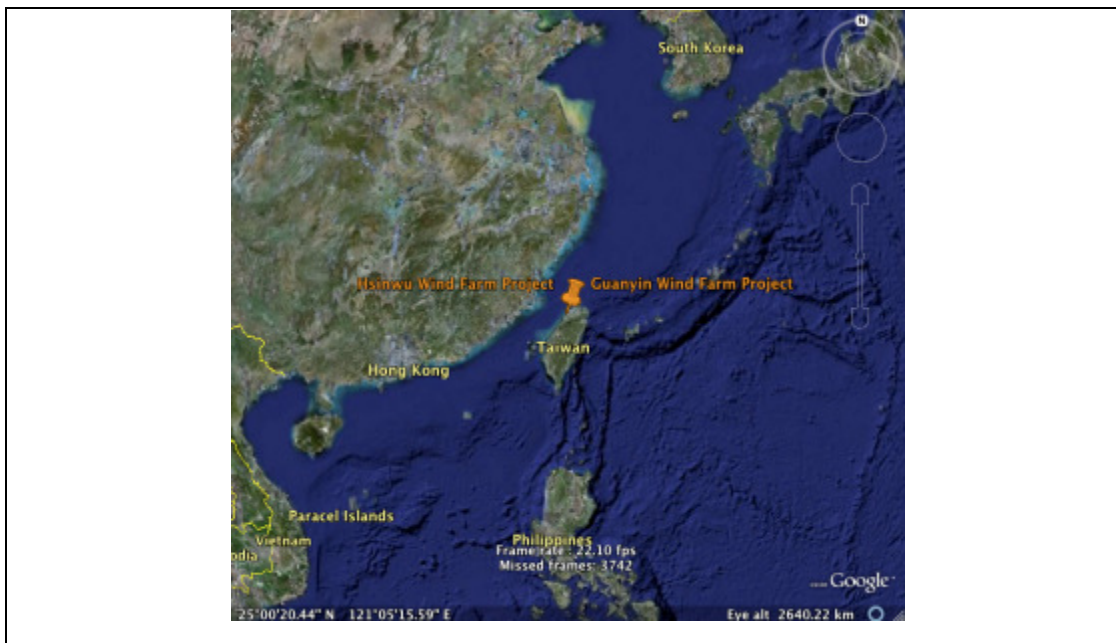
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D.2. Map

[See Toolkit 1.6]



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SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

Stakeholder Comment	Assessment	Response to comment
Question on InfraVest's productivity and technical maintenance plan for Taoyuan wind farm		InfraVest applies advanced, automated monitoring system for the wind farm. Safety precautions regarding the operation are also considered to better maintain performance of the turbines, including different approach in various weather conditions, etc. Furthermore, a periodical maintenance would also be done by the experts.
Possible impact of the turbine towards signal reception for televisions		Signal interference mostly is caused by the rotation of the metal rotor blade of the turbines. Yet, the blade of the wind turbines used in the proposed project is built of Fiber Reinforced Polymer (FRP) material, to minimize this affect. In addition, the location of the wind farm is considerably far from the residential area, therefore, the signal interference effect is very minimal.

E.2. Stakeholder Feedback Round

Please describe report how the feedback round was organised, what the outcomes were and how you followed up on the feedback.

[See Toolkit 2.11]

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SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

[See Toolkit 2.4.1 and Toolkit Annex H]

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
1 Environmental Protection	Bird seasonal migration route might overlap with project sites	Low	Install lighting facilities to avoid collision with wind turbines. Conduct monitoring plan on bird population and mitigation plan in case negative impact is concluded.
2 Environmental Protection	Existing plantation might be removed during construction	Low	Wind turbine locations are located in the low density plantation area (turbines are majorly installed at the outer line of the forest to prevent habitat damages); Re-plantation will be taken after construction completed.
Etc.			
Additional relevant critical issues for my project type	Description of relevance to my project	Assessment of relevance to my project (low/medium/high)	Mitigation measure
1			
2			
Etc.			

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F.2. Sustainable Development matrix

[See Toolkit 2.4.2 and Toolkit Annex I]

Insert table in section C3 from your Stakeholder Consultation report (Sustainable Development matrix).

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Gold Standard indicators of sustainable development.	If relevant copy mitigation measure from "do no harm" – table, or include mitigation measure used to neutralise a score of '–'	Check www.undp.or/mdg and www.mdgmonitor.org Describe how your indicator is related to local MDG goals	Defined by project developer	Negative impact: score '–' in case negative impact is not fully mitigated score 0 in case impact is planned to be fully mitigated No change in impact: score 0 Positive impact: score '+'
Air quality			Chosen parameter: concentrations and emissions of NOx, SOx, VOCs Explanation: Although an increase in air quality is favorable, it requires complex quantification and monitoring, therefore it scores '0'	0
Water quality and quantity			Chosen parameter: Levels of SOx, NOx Explanation: Taiwan is subject to acid rains which are mostly caused by emissions of sulfur and nitrogen compounds. Although an increase in water quality is favorable through the project development, it requires complex quantification and monitoring, therefore it scores '0'.	0
Soil condition			Chosen parameter: Levels of SOx, NOx Explanation: Soil biology and chemistry can be seriously damaged by acid rain. The wind farm mitigates sulfur and nitrogen compounds	0

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			emission in the atmosphere and thus acid rain by replacing the baseline fossil fuel based power generation. The impact on soil condition improvement is favorable, yet, it requires complex quantification and monitoring, therefore it scores '0'.	
Other pollutants			Chosen parameter: level of noise/light Explanation: There is no significant impact regarding the level of noise/light.	0
Biodiversity			Chosen parameter: Number of affected plants and animals Explanation: There is no significant impact on the biodiversity upon project development.	0
Quality of employment			Chosen parameter: Highly qualified jobs resulting from the project activity Explanation: The project development creates recruitment opportunities with high qualification standard for locals people during both construction and operation phase. In a more conservative standpoint, this is scored '0'.	0
Livelihood of the poor			Chosen parameter: Children health care services, access to sanitation, etc. Explanation: There is no significant impact on this aspect resulting from the project development.	0
Access to affordable and clean energy services			Chosen parameter: change in traditional fuel consumption, dependency of fuel/energy imports. Explanation: The project facilitates access to clean electricity in terms of	+

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			replacing fuel use for the same amount of electricity generated given the baseline scenario. Wind farm development in Taiwan is also particularly important in its efforts to reduce dependency on imported fuel.	
Human and institutional capacity			Chosen parameter: change in number of jobs and positions for women Explanation: there is no significant impact on this aspect resulting from the project development.	0
Quantitative employment and income generation			Chosen parameter: number of jobs Explanation: The project activity generates employment opportunities during the project construction and operation period.	+
Balance of payments and investment			Chosen parameter: Balance of payments. Explanation: Wind farm development will help reduce fossil fuel imports in Taiwan. Yet, it requires complex quantification and monitoring, therefore this scores '0'	0
Technology transfer and technological self-reliance			Chosen parameter: number of workshops, seminars held. Explanation: The staff will be trained regarding technical issues. Though, there has not been public seminars or workshop held according to the project. Therefore, this scores '0'.	0
Justification choices, data source and provision of references				
Air quality	The parameter chosen is concentrations and emissions of NOx, SOx, and VOCs. Since the fuel combustion in baseline power generation produces those toxic gases, and other heavy metal pollutants, the project considerably facilitates air quality improvement by producing clean electricity to the national grid.			

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Water quality and quantity	Taiwan is subject to acid rain, which is mostly caused by emissions of Sulfur and Nitrogen compounds to the atmosphere. Therefore, suitable parameter for this aspect is the levels of SO _x and NO _x , derived from fuel combustion in baseline scenario.
Soil condition	The parameter chosen for this aspect is levels of SO _x and NO _x . Soil biology and chemistry can be seriously damaged by acid rain. Some microbes are unable to tolerate changes to low pHs and are killed. Renewable energy development in Taiwan is expected to improve water and soil conditions, by reducing toxic emissions to the atmosphere and thus acid rain.
Other pollutants	Parameter chosen in assessment of other pollutants impact is level of noise/light. Survey result of this aspect is reported in the EIA report, it shows that the effect is very minimum / negligible.
Biodiversity	The measurement is based on number of affected plants and animals. The proposed project is located at the outline of windbreak forest, west Taiwan. Since the turbines are built outside the forest, and the construction process is kept small-scaled at a time, the impact towards biodiversity of the forest is very limited.
Quality of employment	Parameter chosen for this aspect is the employment opportunity with high qualifications derived from the project. Taiwan Government requires a highly skilled chief engineer (with certain certification) to perform such power generation projects, responsible for the construction planning, operational and maintenance of the system.
Livelihood of the poor	In terms of livelihood of the poor: poverty alleviation, access to health care services and sanitation, there were no significant issues derived from the proposed project.
Access to affordable and clean energy services	Parameter chosen for this aspect is change in traditional fuel consumption, dependency of fuel/energy imports. Wind farm development in Taiwan is particularly important for its efforts to reduce dependency on imported fuel, in addition to clean electricity supply. (Reference: Taiwan Statistic Yearbook – Imported Energy and Supply Ratio : http://www7.www.gov.tw/todaytw/2007/intestine/ch06/2-6-23-0.html)
Human and institutional capacity	There were no significant impacts deriving from the proposed project development in any of the possible parameters.
Quantitative employment and income generation	In terms of quantitative employment and income generation, the project activity generates project employment opportunities during the project construction and operation period.
Balance of payments and investment	Wind farm development in Taiwan will help reduce its dependency in fossil fuel imports. Yet, it requires complex quantification and monitoring
Technology transfer and technological self-reliance	In terms of technology transfer, the staffs responsible for operation and maintenance will be trained in regards of technical issues. However, project developer did not hold any public seminars or workshop according to the project.

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SECTION G. Sustainability Monitoring Plan

[See Toolkit 2.4.3 and Toolkit Annex I]

Copy Table for each indicator

No		1
Indicator		Access to affordable and clean energy services
Mitigation measure		
Repeat for each parameter		
Chosen parameter		Replacement of fossil fuel use for the same amount of electricity generation with wind energy
Current situation of parameter		The wind farm is under construction and will generate clean electricity as soon as it is finished
Future target for parameter		The project involves the development of two national grid connected 78.2 MW onshore wind farms. The target for parameter is the clean electricity generation from the project.
Way of monitoring	How	Amount of electricity generated in the wind farm is recorded automatically by power meter.
	When	Data is available on site during validation and verification process
	By who	DOE

No		2
Indicator		Quantitative employment and income generation
Mitigation measure		
<i>Repeat for each parameter</i>		
Chosen parameter		Number of jobs
Current situation of parameter		There are construction job opportunities for local people, in addition to engineers involved in the project.
Future target for parameter		The wind farm generated job opportunities for construction workers and technicians for project building and maintenance
Way of monitoring	How	Employment or contract prove or payment receipt
	When	Data is available on site during validation and verification process
	By who	DOE

Additional remarks monitoring

SECTION H. Additionality and conservativeness

This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

H.1. Additionality

[See Toolkit 2.3]

This section is not applicable as this is a GS VER project.

H.2. Conservativeness

[See Toolkit 2.2]

This section is not applicable as this is a GS VER project.

ANNEX 1 ODA declarations

[See Toolkit Annex D]

This project receives no ODA. The declaration letter will be provided at the validation at a later time.