

Marena Renovables Wind Power Project – ME-L1107. Environmental and Social Action Plan (ESAP)
December 5, 2011

Key items	Actions/Deliverables	Deadline	Status/Details
1. Environmental and Social Management System			
Policies			
The company needs to improve his set of corporate policies and procedures	1.1 Develop a Human Resource Policy	January 15, 2012	Satisfactory
	1.2 Development an environmental policy		Satisfactory
	1.3 Develop specific procedures for contractors (supervision and enforcement mechanism)		Satisfactory
	1.4 Adopt the Voluntary Principles on Security and Human Rights as a guiding norm for hiring and deploying private security guards (www.voluntaryprinciples.org).		Satisfactory
Organizational capacity			
The current in-house staff capacity is insufficient to address potential issues	1.5 Establish a Social Team comprising qualified specialists to prevent and manage potential impacts and supervise and monitor mitigation measures of the social plans. <i>*The client shall present an organigram of the current staff (positions and responsibilities)</i>	March 1, 2012	Satisfactory
	1.6 Establish an Environmental Team comprising qualified specialists to prevent and manage potential impacts and supervise and monitor mitigation measures of the various conservation plans <i>*The client shall present an organigram of the current staff (positions and responsibilities)</i>		Satisfactory
	1.7 Commit to keep on board OCG (social advisor) and QVGA (environmental advisor) consulting firms until adequate in house capacity is built.	December 15, 2012	Satisfactory
Stakeholder Engagement			
Disclosure of information and Consultation	1.8 Organize at least one consultation session with people from Santa Maria, San Dionisio, Alvaro Obregon (content of the	Jan 15, 2012	Satisfactory, the client organized 33 consultations (total

Consultation activities have mainly focused on land acquisition; communities were not fully informed about the construction program, or project-related impacts that may affect them.	session: construction program, project scope and, mitigation measures)		attendance of 800 people) between August 2011 and August 2012.
	1.9 Establish a mechanism to maintain informed affected communities during construction works and disclose such mechanism.	March 1, 2012	Satisfactory
	1.10 Prepare/submit a communication strategy.		Partially satisfactory
	1.11 Develop a grievance mechanism that corresponds to best industry practices (IFC Good Practice Note, Addressing grievances from project-affected communities, dated September 2009)	March 1,2012	Satisfactory
	1.12 Disclose the grievance mechanism to local authorities	March 1,2012	Satisfactory
	1.13 Disseminate the procedure to follow to make a claim and provide training if required		Partially Satisfactory
	1.14 Set up a focal point to address claims during construction	March 1,2012	Partially Satisfactory
Management programs			
There are few and/or incomplete pending management plans	<i>Submit in substance and form satisfactory to IDB the following plans:</i>	February 1, 2012	
	1.15 Community Health and Safety plans to address emergency situations		Satisfactory
	1.16 Traffic management plan		Satisfactory
	1.17 Emergency Response Plan (specifically to address flooding risks and uncontrolled fires)		Satisfactory
	1.18 Environmental management plans (wastewater / waste / noise emissions / hazardous chemicals, soil conservation, soil restoration)		Satisfactory

	1.19 Contractor supervision and control plan.		Satisfactory
	1.20 Integrated Social Management Plan (stakeholder identification, social risks and security assessment, social impacts Jna15identification, monitoring plan, communication plan, corporate social responsibility, indigenous people development plan)	Jan 15, 2012	
2. Labor and workers conditions			
Improvements are required so the project is aligned with best industry practices in terms of health and safety of workers and affected communities	2.1 Incorporate in contractors' contracts clear regulations and penalties for non-compliance with policies, plans and programs (including mitigation measures) adopted by the company	January 15, 2012	Satisfactory
	2.2 Define with contractors clear procedures for reporting environmental, health and safety related incidents/accidents	January 15, 2012	Satisfactory
	2.3 Develop a specific monitoring program to assess causes of incidents/accidents and track performance of the corrective measures	January 15, 2012	Satisfactory
	2.4 Provide evidence of supervision and oversight of the contractors by the company.	Ongoing basis	
	2.5 Ensure that security arrangement made by the company to protect its installation is consistent with good industry practices (Voluntary principles on Security and Human Rights) and national regulations.	Ongoing basis	
	2.6 Provide training to security staff (especially on way of doing when interacting with local communities)	Prior to construction	N.A no security staff hired yet
3. Land acquisition, economic displacement and, livelihood restoration plan			
Since the submission of the original EIA, the project layout has been modified and the final land acquisition arrangements have not been presented A total of 48 land negotiations for the Right of Way of the	3.1 Present the updated land acquisitions arrangements according to final project's layout 3.2 Finalize negotiations of right of way for the transmission line 3.3 Demonstrate that all pending land use permits have been obtained	Prior to financial close	Partially satisfactory

transmission line are still pending			
<p>During the construction period, there will be restrictions on land uses, loss of access to grazing lands, and increased maritime traffic in fishing areas zone.</p> <p>The potential impacts of this on the source of income generation, namely for the fishermen, the cattle herders and, the salt producers, have not been assessed.</p> <p>There is no compensation framework to mitigate those impacts and to compensate for loss of assets or loss of access to assets and/or sites that generates revenues.</p> <p>There is no livelihood restoration plan in place to re-establish livelihoods or income levels of those adversely affected.</p>	<p>3.4 Submit the impact assessment studies on economic activities (part of the ISMP)</p> <p>3.5 Prepare a Compensation Framework that is acceptable in form and content to the Bank. Such framework should include :</p> <ul style="list-style-type: none"> ▪ Eligibility criteria ▪ Compensation mechanism (steps to follow to make a compensation claim) ▪ List and values of assets that will be compensated (for instance fishing nets) ▪ Grievance mechanism (to address concerns about compensation and resolve disputes) ▪ Livelihood restoration plan (that contain measures to improve, or at least restore, means of income-earning capacity, production levels and standards of living) ▪ Means to provide for transitional support for economically displaced persons (based on a reasonable estimate of the time required to restore their income earning capacity and standard of living) ▪ Provisions to disclose the Framework to affected communities <p>3.6 Develop/present a monitoring program to track effectiveness of livelihood restoration measures</p>	<p>TORs or table of contents by March, 1, 2012</p> <p>Final document by June 1st, 2012</p> <p>August 1, 2012</p>	<p>Satisfactory, submitted</p> <p>Non satisfactory, document has been submitted in July 2012, and content is not meeting IDB's expectations. * Improvement to the plan is under way in collaboration with the client. New timeline to be confirmed in October 2012</p> <p>Postponed, new timeline to be determined following completion of the plan</p>
4. Cultural sites			
<p>Archeological sites have been identified sites within the Project's influence area.</p> <p>Final construction authorization</p>	4.1 Present final clearance from INAH (on access roads, on cultural sites surrounding the slat production area and the new underground transmission line route)	Jan 15, 2012	Satisfactory
	4.2 Present a protection plan (including a chance-find procedure)	March 1, 2012	Satisfactory

from INAH and protection program is still pending.	4.3 Disseminate to workers and contractors measures contain in the protection plan	Ongoing basis	
5. Biodiversity conservation			
Birds			
For both wind farm sites, a total of 12 birds species were recorded flying at an altitude that may expose them to a collision (i.e. between 40 m and 120 m)	<p>5.1 The client will implement the following mitigation measures:</p> <ul style="list-style-type: none"> ▪ Technical shutdown of the turbines when significant flock of birds are observed and are expected to fly over the wind farms (the shut down may only applies for few turbines that are located in the birds' trajectory) ▪ Some blades will be painted in red and white to increase their visibility. <p>5.2 The company will implement a post-construction monitoring for birds. that will be surveyed, timing of the year that this will be done</p> <p>*Prior to start the monitoring, the protocol to be followed shall be presented to IDB for validation.</p> <p>*Based on the results, the post- construction monitoring may be extended above 3 years</p>	Ongoing during Operation Monitoring will start upon operation for a period of 3 years.	Status will be determined during monitoring
Bats			
The wind farm site of San Dionisio is frequented by the Lesser Long-nosed bat which is listed as Vulnerable per the IUCN Red List. This species is also the most abundant one being observed during the 12 months baseline survey (i.e. representing 67 % of all observations). The information on the habitat and flight route of the Lesser Long-	<p>5.3 The client will organize a call with the bat Specialist to discuss the following:</p> <ul style="list-style-type: none"> ▪ The flight route; and ▪ The location of roosting sites/ preferred habitat and areas considered critical habitat for the species (within the wind farm site) 	December 20, 2011	Satisfactory

Nosed bat within the future wind farm, is incomplete though the post-construction monitoring will covered this aspect.			
	5.4 As stipulated in IDB's OP 703 Environment and Safeguards Compliance Policy, the Bank can't finance operation that are destroying/degrading or converting habitat that are considered critical for the survival of a species in this case, the Lesser Long-nosed bat. As per the loan agreement, the client will remain in compliance with IDB's policies	Ongoing basis	
	5.5 Implement a post-construction monitoring plan for all bats species * Based on the results, the post- construction period may be extended above 3 years	Prior to operation and Ongoing for the first 3 years of operation	
<i>Tehuantepec Jackrabbit</i>			
This species is listed as Endangered per the IUCN Red List and the wind farm site of Santa Maria contain approximately 40% of the entire population.	The document entitled Biodiversity Conservation Plan and Population Studies of the <i>Lepus Flavigularis</i> (dated June 2011) presented by the company contains relevant recommendations and mitigation measures to prevent impacts and to enhance the conservation of the hare.		
Residual impacts during the construction period may remains such as increased mortality due to accidental road kills and disturbance	<i>On this matter, the company shall undertake the following actions :</i> 5.6 Constitute a technical and scientific committee to supervise and guide conservation actions	April 1,2012	Incomplete

to habitats (burrows, feeding and breeding areas)	<p>5.7 Provide a work plan for the creation of the 200 ha UMA (Unidad de Manejo Ambiental)</p> <p>* The UMA constitutes an important set aside area and its creation is considered as a essential measure to compensate for any residual impact on the Jackrabbit that may occur during the construction as such, the company shall present a work plan that will lead to its creation</p>	Prior to financial close	Satisfactory	
	<p>5.8 Establish and submit to the Bank a monitoring protocol for the construction period (to document accidental road kills and other potential impacts such as inadvertent destruction of burrows) in form and substance satisfactory to IDB</p>	Prior to financial close	Satisfactory	
	<p>5.9 Provide monthly shorts report to IDB (format to be determined upon submission of the monitoring protocol)</p>	Every months starting the first month of construction. Frequency of such reports will be readjusted depending of the results.		
	<p>5.10 Establish a long term monitoring protocol, in form an substance satisfactory to IDB</p>			
	<p><i>The following mitigation measures shall be applied:</i></p>			
	<p>5.11 Minimize the creation of new roads, to the extent possible use existing roads</p> <p>5.12 Design the new roads as such that the width is no larger than 6 m and not asphalted</p> <p>5.13 Avoid fragmentation of habitat</p> <p>5.14 Install signaling devices for drivers in areas where the Jackrabbit is susceptible to be present</p> <p>5.15 Proceed to a visual survey of the area prior to the erection of</p>	Ongoing basis		

	<p>each turbines (to determine presence of juveniles and burrows) Relocate juvenile, if encountered, in safe areas</p> <p>5.16 Monitor access to the site (to ensure that there is no illegal entries for hunting)</p> <p>5.17 Educate the workers, local communities (fishermen, schools etc.) on the presence of the Jackrabbit and its importance</p> <p>5.18 Explore partnership opportunities with UNAM for the long term conservation of the Jackrabbit</p> <p>*The client will present evidence that sufficient financial and human resources are allocated on an ongoing basis to ensure implementation and monitoring of the mitigation measures.</p>		
Marine turtles			
<p>The Laguna Inferior and the Gulf of Tehuantepec are part of the home range of three marine turtles: the Black Turtle, which is considered Endangered, the Leatherback listed as Critically Endangered and the Olive Ridley turtle which is Vulnerable.</p> <p>The increased maritime traffic during construction to transport the turbines and equipment may augment the risk of exposure to collisions for the marine turtles.</p> <p>Nesting areas could also be inadvertently destroyed by the</p>	<p>The Biodiversity Conservation Plan and Population Studies on marine turtles (June 2011) presented by the company contains relevant recommendations and mitigation measures to prevent impacts and to enhance the conservation of the marine turtles.</p> <p><i>The following mitigation measures are expected to be applied:</i></p>		
	5.19 Adopt best industry practices to avoid collisions between maritime traffic and marine turtles (Guidelines to be provided)	Ongoing basis	
	5.20 Establish a monitoring protocol during the construction period in form and substance satisfactory to IDB	Prior to construction	Satisfactory
	5.21 Identify, monitor and protect nesting areas	During construction and operation	
	5.22 Patrolled the site during nighttime to prevent/ diminish illegal collection of egg turtles	During construction and operation	