

3rd MONITORING REPORT

April 29, 2009

Version 1

**Monitoring the period:
October 1st, 2007 – March 31st, 2009**

TROJES HYDROPOWER PROJECT **Registration Number 0649**

Project Site Address

Cortina Baja Presa Trojes,
Municipality of Pihuamo,
State of Jalisco
Mexico

Prepared by

Hidroelectricidad del Pacífico S. de R.L. de C.V.

Homero 1343, 3rd Floor
Col. Chapultepec Morales
Mexico City, 11570
Mexico

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Trojes Hydropower Project

Mexico City, April 29th, 2009

1. Introduction

The objective of this Monitoring Report is to show the calculation of the emission reductions achieved by the project activity under the clean Development Mechanism and verified by a Designated Operational Entity.

The monitoring period is from 01/10/2007 to 31/03/2009 (both days included). The report also shows the Monitoring Plan for data collection and auditing followed by the project developer in order to determine real and credible emission reductions. The monitoring plan is based on the CDM registered project design document Trojes Hydropower Project Version 3 – 19/04/2006, which uses existing baseline and monitoring methodologies (AMS-I.D. ver. 8), which have been approved and made publicly available by the CDM Executive Board. The methodology is designated “Grid connected renewable electricity generation”.

2. Description of the Project Activity

The Trojes Hydropower Project was developed by Impulsora Nacional de Electricidad S. de R.L. de C.V. (INELEC) and Hidroelectricidad del Pacífico S. de R.L. de C.V.

Trojes Project is located at the Trojes Dam in the Barreras River, 50 Km south-east of the city of Colima within the state of Michoacan. The Trojes project generates clean electricity in a rural area located into the Municipality of Pihuamo in the State of Jalisco and the nearest city to the proposed project is Coalcoman, in the state of Michoacan.

The Trojes project has an existing dam at the site. The power plant has a nominal capacity of 8 MW, using the existing pattern of irrigation flow releases to generate electricity. The existing dam is a rock filled dam with an impervious clay core center and has been built with the intent to construct future hydroelectric plant on-site.

The main design characteristics of the Trojes project are summarized in Table 1.

Table 1: Trojes Hydropower Project
Main Project characteristics

Power (MW)	8.0
Design head (m)	61.8
Design rate of flow (m ³ /a)	15.0
Project efficiency	88.0
Transmission line (km)	2.5

The expected total annual average generation output is 38.7 GWh.

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3. Project Participant

Organization:	Hidroelectricidad del Pacífico S. de R. L. de C.V.
Street/P.O. Box:	Homero 1343, 3rd Floor, Col. Chapultepec Morales
City:	Mexico
Post/ZIP:	11570
Country:	Mexico
Telephone:	+52 (55) 5280 9361
FAX:	+52 (55) 5280 9371
URL:	
Person in Charge of the monitoring Report	
Last Name:	Ramírez
First Name:	Casiopea
Personal e-mail:	casiopea.ramirez@latinamerica.enel.it

4. Current status of the project

The Project was registered as a CDM Project activity on 04/11/2006. The crediting period is 7 years starting from the commercial operation date, 01/04/2003, and can be renewed for two more 7 year periods. Up to date, 85,400 CERs have been issued.

The project is operated by an external company called MYOCEN S. de R.L. de C.V. according to international standards. MYOCEN is responsible of executing any corrective action recommended by INELEC, who determines the amount of electricity to be generated according to the annual program and Comision Nacional del Agua (CNA) guidelines and allowed Volumes. INELEC is also responsible of recommending corrective actions that would be implemented by MYOCEN in the case of encountering Generation Deviations.

5. Data monitored

The monitoring methodology used by the project activity consists of metering the electricity generated by the renewable technology.

Table 2: Data to be monitored

ID number	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e),	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment
1	Electricity Generated by the Project	CFE and Project Operator	MWh	<i>m</i>	yearly	all	Electronic and paper	Data will be archived for Two (2) years following the

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	Delivered to Grid (net of parasitic consumption)							end of the Crediting Period
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Net generation Quality Control and Quality Assurance are undertaken through double measurement:

- i. at Trojes power plant instruments and checked by the operating company MYOCEN, and
- ii. by Comision Federal de Electricidad (CFE) measurement devices and procedures.

MYOCEN's meter is only used for internal purposes. CFE is the responsible entity of charging for the wheeling cost of the project, therefore it is CFE who officially establishes the electricity generated by the project and that is actually billed to the consumer partners.

6. Emission Reduction Calculation

The total emission reductions achieved by the project activity through the monitoring period is equal to **35,330 tCO₂e**. The following tables show the values obtained during the monitoring period.

Since the monitoring of emission reduction is achieved through the measurement of net electricity generation, no special operational and management structure is needed apart from normal electricity generation O&M structure. The Table 3 contains the electricity generation of the project during the monitoring period.

Table 3: Trojes Hydropower Project
Electricity generation in MWh (CFE meter) from October 1st, 2007 to March 31st, 2009

Period	2007	2008	2009	TOTAL
January	-	3,280	3,538	6,818
February	-	3,765	3,517	7,282
March	-	3,898	4,090	7,988
April	-	3,914	-	3,914
May	-	3,854	-	3,854
June	-	2,092	-	2,092
July	-	3,314	-	3,314
August	-	3,314	-	3,314
September	-	6,073	-	6,073
October	6,032	5,548	-	11,580
November	3,310	2,576	-	5,885
December	2,183	2,372	-	4,555
Total	11,525	43,999	11,146	66,670

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The Energy Supply per Consumer Partner is provided in the Table 4. Copies of the invoices are available upon request.

Table 4: Trojes Hydropower Project
Energy Supplied (invoiced) in MWh from October 1st, 2007 to March 31st, 2009

Period	2007	2008	2009	TOTAL
January	-	3,224	3,478	6,702
February	-	3,685	3,433	7,118
March	-	3,853	4,010	7,864
April	-	3,904	-	3,904
May	-	3,854	-	3,854
June	-	2,584	-	2,584
July	-	168	-	168
August	-	3,321	-	3,321
September	-	5,746	-	5,746
October	5,872	5,398	-	11,270
November	3,255	2,544	-	5,800
December	2,047	2,309	-	4,356
Total	11,174	40,592	10,921	62,687

Table 5: Trojes Hydropower Project
Auxiliary Electricity Used in MWh from October 1st 2007 to March 31st, 2009

Consumption in MWh				
Period	2007	2008	2009	TOTAL
January	-	8.2	7.9	16.1
February	-	6.0	6.6	12.6
March	-	6.7	6.5	13.2
April	-	5.8	-	5.8
May	-	3.2	-	3.2
June	-	8.5	-	8.5
July	-	17.9	-	17.9
August	-	10.0	-	10.0
September	-	1.5	-	1.5
October	2.0	3.1	-	5.1
November	8.2	10.4	-	18.7
December	11.8	10.5	-	22.3
Total	22.1	91.7	21.0	134.8

The Net electricity generation by the Trojes project is the result of the Electricity generated minus the electricity consumed from the National Grid, as shown in Table 6.

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Table 6: Trojes Hydropower Project
Net Electricity Generation (MWh) from October 1st, 2007 to March 31st, 2009

Period	2007	2008	2009	TOTAL
January	-	3,271	3,530	6,802
February	-	3,759	3,511	7,270
March	-	3,892	4,083	7,975
April	-	3,908	-	3,908
May	-	3,851	-	3,851
June	-	2,083	-	2,083
July	-	3,297	-	3,297
August	-	3,304	-	3,304
September	-	6,071	-	6,071
October	6,030	5,545	-	11,575
November	3,301	2,565	-	5,866
December	2,171	2,361	-	4,533
Total	11,503	43,908	11,125	66,535

MYOCEN delivers to INELEC operating reports in a daily basis according to the Monitoring requirements established in the Monitoring Plan of the registered PDD.

The emission reductions resulting from the project are calculated considering an Emission Factor of 0.531 TCO₂e/MWh, as established in the baseline methodology, and the Net Electricity Generation indicated in the Table 6.

Finally, Table 7 shows the emission reductions obtained during the monitoring period.

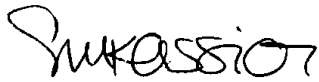
Table 7: Trojes Hydropower Project
Emission Reduction (0.531tonCO₂e/MWh) from Electricity Generation (tCO₂e)

Period	2007	2008	2009	TOTAL
January	-	1,737	1,875	3,612
February	-	1,996	1,864	3,860
March	-	2,066	2,168	4,235
April	-	2,075	-	2,075
May	-	2,045	-	2,045
June	-	1,106	-	1,106
July	-	1,750	-	1,750
August	-	1,755	-	1,755
September	-	3,224	-	3,224
October	3,202	2,944	-	6,146
November	1,753	1,362	-	3,115
December	1,153	1,254	-	2,407
Total	6,108	23,315	5,907	35,330

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For further details see the monitoring spreadsheet “3rd_Monitoring Report_Trojes_27abr09 v1”.

Report Elaborated by:



Casiopea Ramírez

Email: casiopea.ramirez@latinamerica.enel.it