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Att: CDM Executive Board

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Your ref.:	Our ref.:	Date:
CDM Ref 0785	MLEH/ETEL	11 February 2007

Response to request for review
"Chilatán Hydroelectric Project" (0785)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for registration of the "Chilatán Hydroelectric Project" (0785), and we would like to provide the following response to the issues raised by the requests for review.

Comment 1:

The PDD lacks transparency. For example: No information is provided on the background of the project. It is unclear what is the capacity of the power plant already exists on the site (non CDM component); when it was built, etc. It is not clear how the build margin is calculated meaning that establishment of baseline is not transparent (please see Section 2.B.2. of this appraisal below for more detail).

DNV Response:

In DNV's opinion sufficient information on the relevant background of the project is provided in section A.2 of the PDD. Information on the project design as well as the project's history is provided.

There is no other power plant at the site. Section A.2 of the PDD clearly established that – while the Chilatán dam was built for irrigation and power generation – the power plant was never built and eventually only realised as a proposed CDM project activity. This is also clearly addressed in section 3.3 of the validation report which states that "[…] despite the existing dam and the intention to construct a hydroelectric plant at the time the dam was built, no hydroelectric plant was implemented until carbon finance was backing this investment".

Comment 2:

Although the selected baseline is appropriate for this project, the selected baseline methodology does not follow AMS I.D. properly. It is unclear whether the build margin is determined based on emissions of: (a) the five most recent plants built or (b) the most recent 20% of the generating units built. BM should be defined.

DNV Response:

A spreadsheet was published as an annex to the PDD (see appendix A) which includes all details on the determination of the operating margin and build margin emission coefficient and transparently shows how the baseline emission factor has been determined.

From this spreadsheet it is apparent that 12 power plants constituting at least 20% of the total generation in 2004 were used to determine the build margin emission coefficient, since this sample group comprises a larger annual generation than the 5 most recent built power plants.

Comment 3:

The project has used the already approved small-scale monitoring methodology AMS I.D (Version 9): Grid Connected Renewable Electricity Generation. The project participant has a plan to monitor electricity sold by the project to the grid yearly. However the electricity generation and sales are recorded hourly (in any electricity generation plant no matter whether it is small or large). So it must be reported at least monthly if not daily.

The PDD does not mention anything about the calibration of metering equipments. Note that quality control is an important component of the monitoring process.

DNV Response:

The net electricity supplied to the grid will be monitored continuously as for any electricity generation project. In the absence of any specific guidance on the recording frequency in AMS-I.D, the project participant has suggested to record the electricity generation yearly. Obviously, the yearly electricity generation will be an aggregation of more frequent records (hourly, daily, and monthly records).

Section D.4 of the PDD refers to CFE's measurement procedures and devices. Moreover, in their response to corrective action request 3 (CAR 3) in Table 3 in Appendix A to the validation report, the project participants clarified that "Monitoring will be related to measure of electricity generation and this is a responsibility of the CFE (Comision Federal de Electricidad) which is a company with ISO 9001 certification and associated calibration procedures". We can confirm that CFE, Mexico's Federal Electricity Commission, applies well established procedures for calibration of their meters.

We must admit that DNV is rather surprised about the comments made in the requests for review as the requested information has been provided. We acknowledge that not all information may be explicitly included in the PDD. However, when studying all relevant documents (PDD, its annexes and the validation report), the reader should be able to find all the information requested.

We sincerely hope that the Board accepts our above explanations and we look forward to the registration of this project.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION LTD

Einar Telnes
Director
International Climate Change Service

Michael Lehmann
Technical Director

Appendix A

		Name of the Generation Unit	Scheme	Municipality	State	Date operations started	Installed Capacity (MW) 2002	2003	2004	Gross Generation (GWh) 2002	2003	2004	CO2 Emissions (tonnes) 2002	2003	2004	Carbon Emission Factor 2002	2003	2004	
	31	Guaymas II (Carlos Rodriguez Rivero		Guaymas	Sonora	10-Aug-62	484	484	484	187	195	41	193,041	203,411	41,547	1.034	1.043	1.007	
	50	Poza Rica		Tihuatlán	Veracruz	4-Feb-63	117	117	117	654	568	441	539,072	484,412	397,125	0.824	0.853	0.900	
	18	Valle de Mexico		Acolman	México	1-Apr-63	450	450	450	3,894	3,635	2,284	708,784	580,468	374,579	0.182	0.160	0.164	
	27	Francisco Villa		Delicias	Chihuahua	22-Nov-64	399	399	399	1,920	1,773	1,677	1,182,656	1,151,104	1,072,084	0.616	0.649	0.639	
	25	Monterrey		S.N. Garza	Nuevo Leon	15-Jul-65	465	465	465	2,538	1,784	287	1,342,594	793,783	55,188	0.529	0.445	0.192	
	19	Jorge Luque [LyFC]		Tultitlán	México	N/A	362	362	362	N/A	N/A	N/A	N/A	N/A	N/A				
	21	Salamanca		Salamanca	Guanajuato	16-Jun-71	866	866	866	4,841	4,249	3,183	3,266,400	2,344,996	1,436,931	0.675	0.552	0.451	
	47	Dos Bocas		Medellín	Veracruz	14-Aug-74	452	452	452	2,429	3,013	3,086	1,315,693	1,644,476	1,583,107	0.542	0.546	0.513	
	49	Gómez Palacio		Gomez Palacio	Durango	5-Jan-76	200	200	200	1,045	721	757	591,390	395,484	394,989	0.566	0.549	0.522	
	23	Altamira		Altamira	Tamaulipas	19-May-76	800	800	800	4,656	3,528	3,955	3,278,192	2,479,758	2,815,868	0.704	0.703	0.712	
	34	Lerma (Campeche)		Campeche	Campeche	9-Sep-76	150	150	150	813	841	784	707,889	725,875	688,216	0.871	0.863	0.877	
	32	Mazatlán II (Jose Aceves Pozos)		Mazatlán	Sinaloa	13-Nov-76	616	616	616	3,284	3,677	3,280	2,313,520	2,543,992	2,252,707	0.704	0.692	0.687	
	35	Mérida II		Mérida	Yucatán	1-Apr-81	168	198	198	1,100	22	953	0	25,683	49,630	0.000	1.171	0.052	
	48	El Sauz		P. Escobedo	Querétaro	29-Jul-81	469	469	597	1,371	1,277	3,139	254,647	390,888	781,775	0.186	0.306	0.249	
	20	Manzanillo		Manzanillo	Colima	1-Sep-82	1,200	1,200	700	6,449	6,328	5,355	4,270,855	4,128,721	3,431,651	0.662	0.652	0.641	
	38	Río Escondido (Jose Lopez Portillo)		Rio Escondido	Coahuila	21-Sep-82	1,200	1,200	1,200	7,516	8,387	8,999	11,174,878	12,346,091	12,952,607	1.487	1.472	1.439	
	30	Puerto Libertad		Pitiquito	Sonora	1-Aug-85	632	632	632	3,350	3,127	3,081	2,316,464	2,159,476	2,118,288	0.692	0.691	0.688	
	22	Villa de Reyes		Villa de Reyes	SLP	1-Nov-86	700	700	700	2,926	4,239	3,579	1,935,216	2,803,900	2,327,377	0.661	0.661	0.650	
	56	Nachi-Cocom		Mérida	Yucatán	16-Apr-87	79	79	79	249	277	234	233,631	260,395	209,716	0.937	0.941	0.898	
	20	Manzanillo (Manuel Alvarez Moreno)		Manzanillo	Colima	24-Jul-89	700	700	1,200	5,034	4,113	4,069	3,185,310	2,592,630	2,592,364	0.633	0.630	0.637	
	29	Lerdo (Guadalupe Victoria)		Lerdo	Durango	18-Jun-91	320	320	320	1,980	2,037	2,335	1,332,895	1,383,451	1,561,237	0.673	0.679	0.669	
	17	Tula (Francisco Perez Rios)		Tula	Hidalgo	30-Jun-91	1,989	1,989	1,989	9,734	8,826	8,102	6,368,679	5,639,108	4,066,439	0.654	0.639	0.502	
	24	Tuxpan (Adolfo Lopez Mateos)		Tuxpan	Veracruz	30-Jun-91	2,100	2,100	2,100	15,031	13,241	14,327	9,428,677	8,368,248	9,011,463	0.627	0.632	0.629	
	39	Carbón II		Nava	Coahuila	2-Nov-93	1,400	1,400	1,400	8,636	8,294	8,884	11,529,858	11,070,976	11,852,237	1.335	1.335	1.334	
	43	Petacalco (Plutarco Elias Calles)		La Unión	Guerrero	18-Nov-93	2,100	2,100	2,100	13,879	13,859	7,915	12,155,645	13,321,403	7,000,072	0.876	0.961	0.884	
	37	Valladolid (Felipe Carrillo Puerto)		Valladolid	Yucatán	30-Jun-94	295	295	295	415	384	423	336,991	313,067	348,029	0.812	0.816	0.823	
	36	Topolobampo II (Juan de Dios Batiz)		Ahome	Sinaloa	12-Jun-95	360	360	360	1,997	2,030	1,951	1,330,843	1,372,324	1,299,753	0.667	0.676	0.666	
	44	Samalayuca II		Cd. Juárez	Chihuahua	12-May-98	522	522	522	3,902	3,486	3,170	1,467,074	1,362,345	446,222	0.376	0.391	0.141	
	28	Samalayuca		Cd. Juárez	Chihuahua	12-May-98	316	316	316	1,233	1,360	3,153	852,530	868,865	855,336	0.692	0.639	0.271	
	26	Río Bravo (Emilio Portes Gil)		Rio Bravo	Tamaulipas	1-Jul-99	520	520	520	1,031	695	741	418,580	125,932	125,932	0.406	0.181	0.170	
	63	Mérida III	IPP	Mérida	Yucatán	9-Jun-00	484	484	484	3,227	3,556	3,469	1,154,518	1,316,802	1,256,799	0.358	0.370	0.362	
	45	Huinalá I y II		Pesquería	Nuevo Leon	17-Sep-00	968	968	968	1,333	2,690	2,007	837,121	1,689,056	1,260,194	0.628	0.628	0.628	
	67	El Encino (Chihuahua II)		Chihuahua	Chihuahua	9-May-01	554	554	554	2,950	2,593	2,004	1,185,486	1,042,120	805,602	0.402	0.402	0.402	
	64	Hermosillo	IPP	Hermosillo	Sonora	1-Oct-01	238	238	250	507	542	238	203,824	217,971	95,456	0.402	0.402	0.402	
	70	Saltillo	IPP	Ramos Arizpe	Coahuila	19-Nov-01	248	248	248	1,796	1,306	1,298	721,813	524,882	521,667	0.402	0.402	0.402	
	68	Tuxpan II	IPP	Tuxpan	Veracruz	15-Dec-01	495	495	495	3,552	3,540	3,596	1,427,550	1,422,727	1,445,234	0.402	0.402	0.402	
	72	Río Bravo II	IPP	Valle Hermoso	Tamaulipas	18-Jan-02	495	495	495	3,127	3,300	3,098	1,256,743	1,326,271	1,245,087	0.402	0.402	0.402	
BM	74	Monterrey III	IPP	S.N. Garza	Nuevo Leon	27-Mar-02	449	449	449	2,453	3,098	2,892	985,862	1,245,087	1,162,296	0.402	0.402	0.402	
BM	75	Altamira II	IPP	Altamira	Tamaulipas	01-May-02	495	495	495	2,568	3,138	3,155	1,032,080	1,261,163	1,267,996	0.402	0.402	0.402	
BM	77	El Sauz (Bajio)	IPP	S. Luis de la Paz	Guanajuato	4-Jun-02	575	575	577	4,401	4,432	5,257	1,768,764	1,781,223	2,112,790	0.402	0.402	0.402	
BM	69	Tuxpan III y IV	IPP	Tuxpan	Veracruz	23-May-03		983	983	0	4,636	7,029	0	1,863,210	2,824,958		0.402	0.402	
BM	46	Campeche	IPP	Palizada	Campeche	28-May-03		252	252	0	1,093	1,772	0	439,277	712,168		0.402	0.402	
BM	79	Chihuahua III	IPP	Juárez	Chihuahua	9-Sep-03		259	259	0	432	1,456	0	173,621	585,167		0.402	0.402	
BM	80	Naco - Nogales	IPP	Agua Prieta	Sonora	4-Oct-03		258	258	0	572	1,717	0	229,887	690,063		0.402	0.402	
BM	76	Altamira III y IV	IPP	Altamira	Tamaulipas	24-Dec-03		1,036	1,036	0	501	6,541	0	201,352	2,628,831		0.402	0.402	
BM	25	Tuxpan (Adolfo Lopez Mateos)		Tuxpan	Veracruz	3-Jan-04			163	0	0	7,786	0	0	3,129,197			0.402	
BM	73	Río Bravo III	IPP	Valle Hermoso	Tamaulipas	1-Apr-04			495	0	0	2,440	0	0	980,637			0.402	
BM	18	Valle de Mexico		Acolman	México	1-Jun-04	549	549	549	1,150	1,736	1,490	722,353	1,089,885	935,906	0.628	0.628	0.628	
BM	2	Chicoasén (Manuel Moreno Torres 2a Etapa)		Chicoasén	Chiapas	22-Dec-04			900	0	0	677	0	0	0			0.000	
		Otras					2,043	2,043	4,494							Weighted Average OM			Average OM
																2002	2003	2004	
					Total National Interconnected system (excluding hydro, wind, nuclear and geothermal)		**28,024**	**30,842**	**34,993**	**139,159**	**143,131**	**157,433**	**95,328,117**	**97,705,797**	**95,802,514**	**0.685**	**0.683**	**0.609**	**0.657**
																			Build Margin
BM	Plants considered for Build Margin Calculation				**Build Margin**				**6,416**			**42,212**			**17,030,008**				**0.403**
CEF	Values calculated in worksheet "CEF for Build Margin"																	**Efy**	**0.530**

Total generation in 2004 **198,393** **GWh**

Total generation of plants considered in the BM **42,212** **MW**

21%

Notes: The main source for building the tables are from the Mexican Energy Ministry
The plants included in this list are based on those listed in the Prospectiva del Sector Electrico 2003-2012, 2004-2013, 2005-2014
The values for Installed capacity in MW are consolidated from the Prospectiva del Sector Electrico 2003-2012, 2004-2013, 2005-2014
The values for power generation and CO2 emissions are taken from the Energy Ministry website http://www.energia.gob.mx/wb2/Sener/Sene_Emisiones_del_Sector_Electrico
The start dates of the power plants is based in the CFE website

TG Simple Cycle Gas Turbine
CC Combine Cycle (CCGT)
TC Thermoelectric (Fuel Oil based)
DUAL Fuel Oil and Coal
CAR Coal
HID Hydroelectric