

26 June 2007

**Initial Response by the Project Proponent
to the Request for Review of Project 1024
Phu Khieo Bio-Energy Cogeneration Project (PKBC)**

Reference is made to the request for review by members of the Executive Board regarding Phu Khieo Bio-Energy Cogeneration Project. The project proponent, Phu Khieo Bio-Energy Co., Ltd. would like to submit the following responses.

- 1. Further evidence should be provided regarding how a benchmark rate of 12% has been validated. In doing so it should be noted that the additionality tool requires that, “project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark”. In particular it should be confirmed how any risk premiums applied in the calculation of the WACC have been validated in the context of a project activity with a 21 year firm contract.**

The benchmark rate of 12% was based on the weighted average cost of capital (WACC) for the Mitr Phol Group calculated at the beginning of 2002 before the decision about the Phu Khieo project was made. The following values as shown in *Table 1* were used in the calculation of WACC.

Table 1 Key Assumptions for Calculating WACC

Parameter	Value	Source
Risk free rate	5.97%	Coupon rate of long-term government bond as of 28 December 2001
Market Risk Premium	8.46%	US Market Risk Premium (MRP) plus Country Risk Premium
Business Risk Index (BRI) or Beta	0.68	Average Beta from other companies with similar size and industry
Leverage	1.5	Approximate D/E ratio of the Mitr Phol Group in 2001
Tax	30%	Corporate Tax Rate in Thailand
Debt Risk Premium	4.71%	Spread between the company cost of debt and risk free rate

The evidence supporting each of the key parameters is exhibited as follows:

Risk Free Rate

The government bond yield as of 28 December 2001 was used to represent the risk free rate (K_{Rf}). To reflect the company's intention to operate in this business in the long term, the longest maturity was selected, which was 19 year to maturity according to the Thai Bond Market Association (TBMA). *Table 2* presents government bond yield at different time to maturity (TTM), in which the 19-year bond yield to maturity was 5.97%.

Table 2 Government Bond Yield to Maturity, as of 28 December 2001

TTM (Yrs.)	Yield (%)	TTM (Yrs.)	Yield (%)
0.08	2.02	10	4.84
0.25	2.19	11	4.98
1	2.49	12	5.12
2	2.68	13	5.25
3	2.79	14	5.37
4	3.03	15	5.49
5	3.37	16	5.61
6	3.79	17	5.73
7	3.97	18	5.85
8	4.34	19	5.97
9	4.52		

Source: www.thaibma.or.th >price&yield >yieldcurve > government; as of 28 December 2001

Market Risk Premium

Market Risk Premium (MRP) was calculated from the US MRP plus country risk premium for Thailand. The US MRP of 6.21% was derived from the spread between the average return on the US stock market and the average return on the US Treasury Bill during 1928 – 2001 as shown in *Table 3*.

Table 3 Average Return on US Stock Market and on US Treasury Bill

Year	Annual Returns on Investments in		Compounded Value of \$ 100	
	Stocks	T.Bills	Stocks	T.Bills
1928	43.81%	3.08%	\$ 143.81	\$ 103.08
1929	-8.30%	3.16%	\$ 131.88	\$ 106.34
1930	-25.12%	4.55%	\$ 98.75	\$ 111.18
1931	-43.84%	2.31%	\$ 55.46	\$ 113.74
1932	-8.64%	1.07%	\$ 50.66	\$ 114.96
1933	49.98%	0.96%	\$ 75.99	\$ 116.06
1934	-1.19%	0.30%	\$ 75.09	\$ 116.41
1935	46.74%	0.23%	\$ 110.18	\$ 116.68
1936	31.94%	0.15%	\$ 145.38	\$ 116.86
1937	-35.34%	0.12%	\$ 94.00	\$ 117.00
1938	29.28%	0.11%	\$ 121.53	\$ 117.12
1939	-1.10%	0.03%	\$ 120.20	\$ 117.16
1940	-10.67%	0.04%	\$ 107.37	\$ 117.21
1941	-12.77%	0.02%	\$ 93.66	\$ 117.23
1942	19.17%	0.33%	\$ 111.61	\$ 117.62
1943	25.06%	0.38%	\$ 139.59	\$ 118.06
1944	19.03%	0.38%	\$ 166.15	\$ 118.51
1945	35.82%	0.38%	\$ 225.67	\$ 118.96
1946	-8.43%	0.38%	\$ 206.65	\$ 119.41
1947	5.20%	0.38%	\$ 217.39	\$ 119.87
1948	5.70%	0.95%	\$ 229.79	\$ 121.01
1949	18.30%	1.16%	\$ 271.85	\$ 122.41
1950	30.81%	1.10%	\$ 355.60	\$ 123.76
1951	23.68%	1.34%	\$ 439.80	\$ 125.42
1952	18.15%	1.73%	\$ 519.62	\$ 127.59
1953	-1.21%	2.09%	\$ 513.35	\$ 130.25
1954	52.56%	1.60%	\$ 783.18	\$ 132.34
1955	32.60%	1.15%	\$ 1,038.47	\$ 133.86
1956	7.44%	2.54%	\$ 1,115.73	\$ 137.26
1957	-10.46%	3.21%	\$ 999.05	\$ 141.66
1958	43.72%	3.04%	\$ 1,435.84	\$ 145.97
1959	12.06%	2.77%	\$ 1,608.95	\$ 150.01
1960	0.34%	4.49%	\$ 1,614.37	\$ 156.75
1961	26.64%	2.25%	\$ 2,044.40	\$ 160.28
1962	-8.81%	2.60%	\$ 1,864.26	\$ 164.44
1963	22.61%	2.87%	\$ 2,285.80	\$ 169.16
1964	16.42%	3.52%	\$ 2,661.02	\$ 175.12
1965	12.40%	3.84%	\$ 2,990.97	\$ 181.84
1966	-9.97%	4.38%	\$ 2,692.74	\$ 189.81
1967	23.80%	4.96%	\$ 3,333.69	\$ 199.22
1968	10.81%	4.97%	\$ 3,694.23	\$ 209.12
1969	-8.24%	5.96%	\$ 3,389.77	\$ 221.59
1970	3.56%	7.82%	\$ 3,510.49	\$ 238.91
1971	14.22%	4.87%	\$ 4,009.72	\$ 250.55
1972	18.76%	4.01%	\$ 4,761.76	\$ 260.60
1973	-14.31%	5.07%	\$ 4,080.44	\$ 273.81
1974	-25.90%	7.45%	\$ 3,023.54	\$ 294.21
1975	37.00%	7.15%	\$ 4,142.10	\$ 315.24
1976	23.83%	5.44%	\$ 5,129.20	\$ 332.39
1977	-6.98%	4.35%	\$ 4,771.20	\$ 346.85
1978	6.51%	6.07%	\$ 5,081.77	\$ 367.91
1979	18.52%	9.08%	\$ 6,022.89	\$ 401.31
1980	31.74%	12.04%	\$ 7,934.26	\$ 449.63
1981	-4.70%	15.49%	\$ 7,561.16	\$ 519.28
1982	20.42%	10.85%	\$ 9,105.08	\$ 575.62
1983	22.34%	7.94%	\$ 11,138.90	\$ 621.32
1984	6.15%	9.00%	\$ 11,823.51	\$ 677.24
1985	31.24%	8.06%	\$ 15,516.60	\$ 731.83
1986	18.49%	7.10%	\$ 18,386.33	\$ 783.79
1987	5.81%	5.53%	\$ 19,455.08	\$ 827.13
1988	16.54%	5.77%	\$ 22,672.40	\$ 874.86
1989	31.48%	8.07%	\$ 29,808.58	\$ 945.46
1990	-3.06%	7.63%	\$ 28,895.11	\$ 1,017.59
1991	30.23%	6.74%	\$ 37,631.51	\$ 1,086.18
1992	7.49%	4.07%	\$ 40,451.51	\$ 1,130.39
1993	9.97%	3.22%	\$ 44,483.33	\$ 1,166.79
1994	1.33%	3.06%	\$ 45,073.14	\$ 1,202.49
1995	37.20%	5.60%	\$ 61,838.19	\$ 1,269.83
1996	23.82%	5.14%	\$ 76,566.48	\$ 1,335.10
1997	31.86%	4.91%	\$ 100,958.71	\$ 1,400.65
1998	28.34%	5.16%	\$ 129,568.35	\$ 1,472.93
1999	20.89%	4.39%	\$ 156,629.15	\$ 1,537.59
2000	-9.03%	5.37%	\$ 142,482.69	\$ 1,620.16
2001	-11.85%	5.73%	\$ 125,598.83	\$ 1,712.99
Average			Risk Premium	
1928-2001	10.12%	3.91%	6.21%	

Source : <http://pages.stern.nyu.edu/~adamodar/pc/datasets/histretSP.xls>

The country risk premium was taken from a study at Stern Business School which was updated in January 2002. This study found that the country risk premium for Thailand was 2.25%, as shown in *Table 4*.

Table 4 Country Risk Premium for Thailand, updated January 2002

Country	Bond Rating	Default Spread	Country Risk Premium
Thailand	Baa1	150	2.25%

source : <http://pages.stern.nyu.edu/~adamodar/pc/archives/ctryprem02.xls>

Hence, the market risk premium for Thailand was $6.21\% + 2.25\% = 8.46\%$

Business Risk Index (BRI) or Beta

BRI was calculated as the average Beta of other companies that were in the same business and were about the same size as Mitr Phol Group. The average beta was 0.68 for the year 2001 as shown in *Table 5*.

Table 5 Average Beta for Sugar Companies, 2001

Name	Industry Sub-group	Beta
BALRAMPUR CHINI MILLS	Sugar	0.77
ILLOVO SUGAR LTD	Sugar	0.53
TONGAAT-HULETT GROUP LTD	Diversified Operations	0.72
	Average	0.68

Source: <http://pages.stern.nyu.edu/~adamodar/pc/archives/emergcompfirm02.xls>

Debt Risk Premium

Debt Risk Premium (K_d) was calculated from the spread between the interest rate at which the company's debt was financed and the risk free rate. The average MLR of 5 big commercial banks in Thailand as of 28 December 2001 was 7.20% as shown in *Table 6*.

Table 6 MLR for Big Commercial Banks in Thailand, as of 28 December 2001

Bank	MLR (%)
BBL	7.00
KTB	7.25
SCB	7.25
KBANK	7.00
BAY	7.50
average	7.20

Source: http://www.bot.or.th/bothomepage/databank/Financial_Institutions/interestrates/interest_range_t.asp; as of 28 December 2001

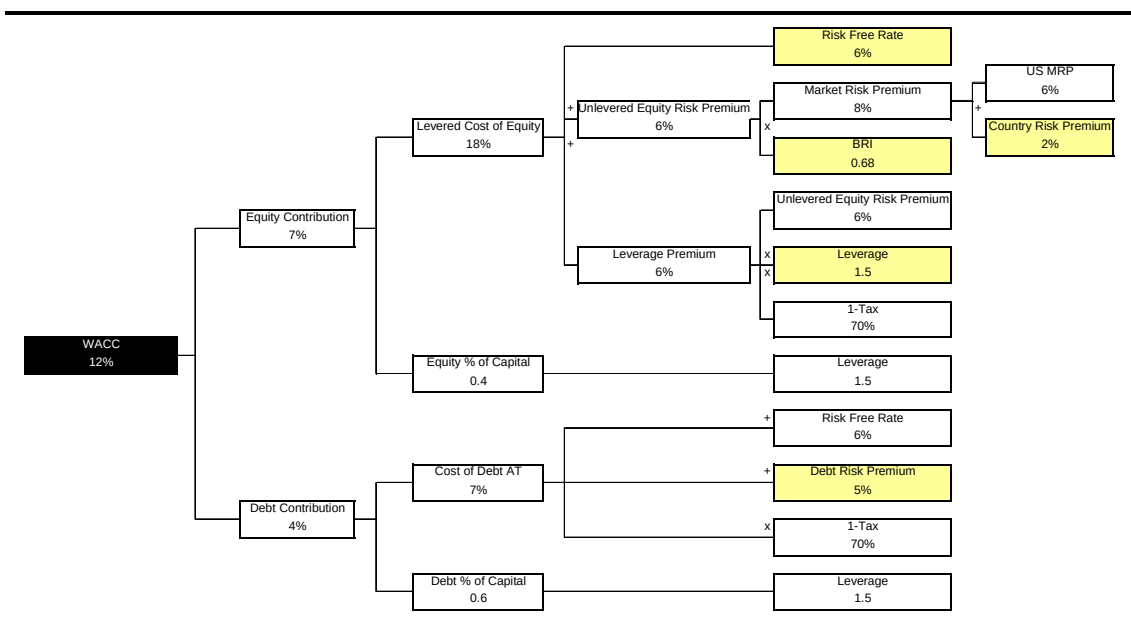
Thus the debt risk premium compared to the 1-year government bond, which was 2.49% (see Table 2) became 4.71% as shown below:

$$\begin{aligned} K_d &= 7.20\% - 2.49\% \\ &= 4.71\% \end{aligned}$$

WACC

When all the information was plugged into the capital tree model, it gave the WACC of approximately 12%, as shown in Figure 1.

Figure 1 Capital Tree for Calculating WACC



During the validation, the non-final version was mistakenly provided to DNV, although the benchmark rate of 12% was still the correct value used when the decision about Phu Khieo Project was made. The final version of the spreadsheet for calculation of WACC, as also shown in Figure 1, is presented in Attachment 1 – WACC_MitrPhol2002.xls.

This benchmark rate of 12% has been applied in the past for Dan Chang Bio-Energy Cogeneration project, which is also implemented as a CDM project (reference number 1020), with the same project activities under similar conditions developed by Mitr Phol Group. This application demonstrates that this benchmark has been consistently used in the past.

In addition, this approach for applying the benchmark rate based on WACC was consistently applied for other subsequent projects within Mitr Phol Group such as Petrogreen ethanol project, as demonstrated in the attached documentary proof

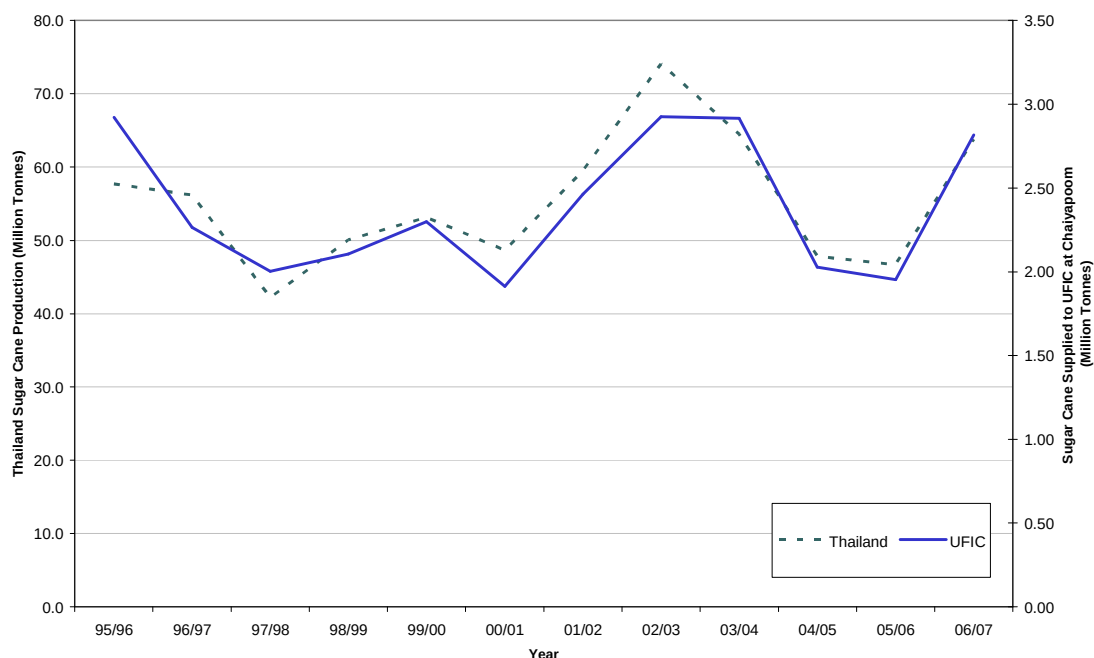
Attachment2 – PetrogreenFeas.pdf. Petrogreen project was approved in 2005 based on the calculated project IRR of 13.16% compared to the discount rate of 13%. This benchmark rate of 13% was based on an updated WACC for Mitr Phol Group undertaken by Stern Stewart & Co., a credible financial advisor who developed the concept of Economic Value Added (EVA), as exhibited in *Attachment3 – WACC_SternStewart_2003*. Although this study concluded after the decision about the project was made, it confirmed the value of WACC for Mitr Phol which was higher than the value applied for Phu Khieo Project. This information about Mitr Phol's cost of capital of 13% is also publicly available from the State Enterprise Policy Office (SEPO) – a government office under the Ministry of Finance – at <http://www.sepo.go.th/img/upload/Value%20Based%20Management%20for%20Mitr%20Phol.pdf> (please see p.23).

With reference to the tool for the demonstration of additionality, an alternative benchmark rate could have been used, which was *government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert*. In the project financial plan (66% debt financing), Phu Khieo expected to pay off its debt in 11 years. When the 11-year bond yield of 4.98% as shown in *Table 2* was added to debt risk premium of 4.71% as calculated above, we could arrive at the benchmark rate of 9.69%, which was still higher than the project IRR of 7.79%. Note that this benchmark rate is extremely conservative and unrealistic because it is based on the assumption that all the capital is financed by debt. In reality, it is unlikely that this project will be able to secure 100% debt financing, in which case the debt servicing years would be longer and government bond yield would be higher accordingly.

In addition, it should be noted that another proposed CDM project – 1036 Khon Kaen Sugar Power Plant Project – which operates in the same sugar industry in Thailand also used a weighted average cost of capital of 11.7%, which is similar to the value used by this project.

With regard to the application of risk premium, the same risk premium as Mitr Phol Group's was applied to this project because although Phu Khieo was able to enter into a long term Power Purchase Agreement (PPA) with EGAT, Phu Khieo still shared the same risks as Mitr Phol sugar business, mainly due to the uncertainty of sugar cane supply. Most of sugar cane supplied to United Farmers & Industry Co., Ltd. (UFIC – a sugar mill that is owned by Mitr Phol Group) is still rain fed. *Figure 2* and *Table 7* show the fluctuation of sugar cane supplied to UFIC sugar mill in Chaiyapoom province, where Phu Khieo Project is located, which is also highly correlated to Thailand sugar cane production during the past decade.

Figure 2 Cane Supply to UFIC in Chaiyapoom compared to Sugar Cane Production in Thailand, 1995 – 2007



Source: Thailand sugar cane production from Office of Agricultural Economics: www.oae.go.th and sugar cane supplied to UFIC sugar mill from Mitr Phol Group.

Table 7 Cane Supply to UFIC in Chaiyapoom compared to Sugar Cane Production in Thailand, 1995 – 2007

Year	Thailand Sugar Cane Production	Change on previous year	Sugar Cane supplied to UFIC	Change on previous year
	tonnes	%	tonnes	%
95/96	57,693,352		2,921,828	
96/97	56,191,637	-2.60%	2,264,891	-22.48%
97/98	42,200,977	-24.90%	2,002,588	-11.58%
98/99	50,059,021	18.62%	2,106,979	5.21%
99/00	53,129,102	6.13%	2,299,586	9.14%
00/01	48,651,691	-8.43%	1,912,789	-16.82%
01/02	59,493,403	22.28%	2,464,155	28.83%
02/03	74,071,951	24.50%	2,925,769	18.73%
03/04	64,484,363	-12.94%	2,916,192	-0.33%
04/05	47,816,093	-25.85%	2,027,931	-30.46%
05/06	46,689,722	-2.36%	1,952,250	-3.73%
06/07	63,797,808	36.64%	2,818,072	44.35%

Source: Thailand sugar cane production from Office of Agricultural Economics: www.oae.go.th and sugar cane supplied to UFIC sugar mill from Mitr Phol Group.

In particular, with a firm contract, Phu Khieo shall supply the contracted amount of electricity to EGAT, with penalty applied in case of failure to deliver. According to Clause 17.4.2 of The Power Purchase Agreement (PPA) that Phu Khieo entered into with EGAT, *‘in case actual power volume is lower than the volume of power in contract, the power into money shall be in actual power volume deducted at 20% of difference of power volume in contract and in actual volume.’* (See Attachment4 – PPA_PenaltyClause.pdf) This implies that if the power supply is less than 4.83 MW, a negative capacity payment will be made, ie a fine.

In the year when there is low sugar cane throughput, the plant will have to look for more supplementary fuel, which is far more costly than bagasse supplied from UFIC sugar mill, partly due to the cost of transport. By its engineering design, it is neither possible to co-fire any fossil fuel in this power plant. Therefore, the uncertainty of the sugar cane supply can impose a significant financial burden on Phu Khieo project (both in terms of opportunity cost of being unable to sell electricity and in terms of fine).

Being the pioneer of new high efficiency biomass technology in Thailand also exposes Phu Khieo to the risk of unfamiliar technology. In fact, there was an incident in 2006 which led Dan Chang (Phu Khieo’s brother project employing the same technology and the same project activities) to shut down the power plant for approximately 2 months. Dan Chang received no revenues during the shutdown and was also penalized by EGAT for 1,099,224 Baht and 1,069,092 Baht in March and April 2006 respectively. (See Attachment5 – EGAT_FineNotification.pdf)

Given that Phu Khieo shared similar risks with the sugar business as it had to rely on the amount of sugar cane supply by UFIC sugar mill, Mitr Phol considered that the group WACC was appropriate to be applied to Phu Khieo project.

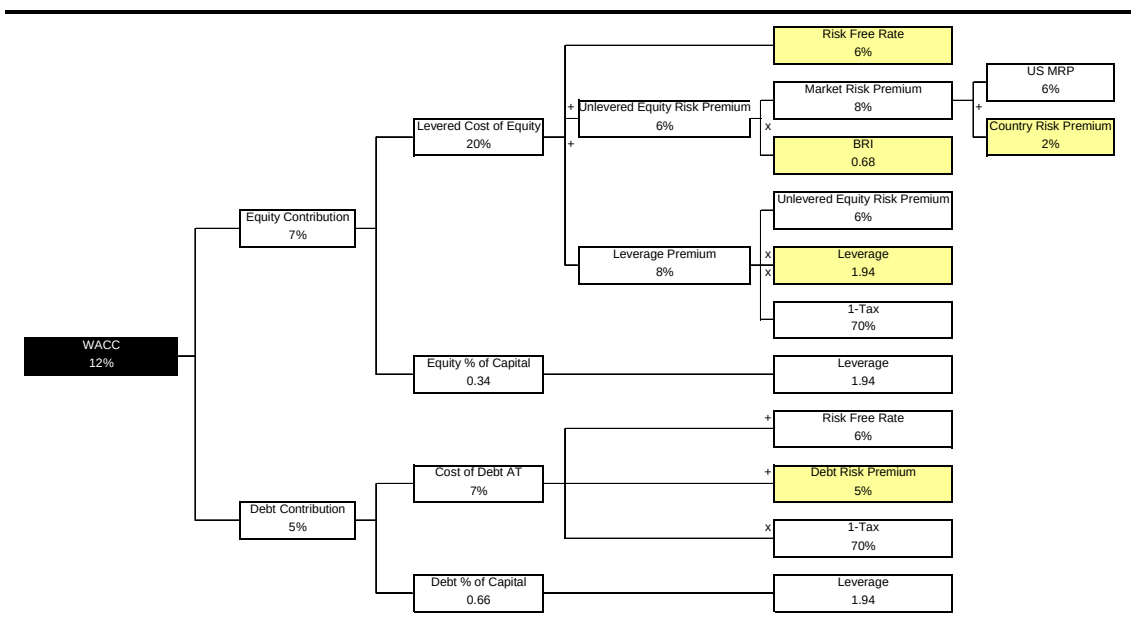
2. In addition the assumption that the project is 40% equity financed does not match with the IRR calculation which indicates 34% equity financing.

The 40% equity financed shown in the WACC calculation is based on Mitr Phol Group financing plan, while the equity financing for Phu Khieo Bio-Energy Co., Ltd, as a separate company, is only 34%, as shown in the IRR calculation for this project. The decision to go ahead with Phu Khieo Project was made by Mitr Phol Group.

Since this project is a new business line within the Mitr Phol Group, the existing shareholders were not willing to invest a large proportion of equity financing in this project. It also happened that in the early 2000’s, banks in Thailand were more willing than before to lend to new renewable energy projects. Phu Khieo project was then able to secure up to 66% debt financing, which was higher than the Group average.

It should also be noted that had the 34% equity been applied in the same capital tree model with the same risk premium as the Mitr Phol Group, the WACC for Phu Khieo project would produce insignificant difference to the WACC value of around 12%, as shown in Figure 3 below.

Figure 3 Alternative WACC that could have been used for Phu Khieo



3. The IRR without CDM revenues is quoted as being 7.79% on page 14 of the PDD and 9.2% on page 15.

Both IRR calculations were shown to reflect the historical events of the CDM projects. However, the 9.2% IRR figure as calculated by the World Bank Prototype Carbon Fund (PCF) was based on approximate information gathered over a short timeframe, with no supporting explanation submitted to the Mitr Phol Group to justify the Project Concept Note at the time of writing ⁽¹⁾.

Mitr Phol Group at the same time commissioned the COGEN feasibility study, which calculated the IRR of 7.79%, using detailed information and with a strong set of explanatory assumptions. This IRR figure of 7.79% has been used as the basis for the financial analysis shown in the PDD before the CER revenues, while the World Bank PCN information was also provided as supplementary information since it provided further information on sensitivity analysis and on the expected CER revenues at that time.

The sensitivity analysis of the project IRR based on the COGEN study due to the changes in the bagasse prices (the primary fuel), the rice husk prices (secondary fuel) and the investment cost is shown below.

(1) Although this project was initiated by The World Bank PCF, they discontinued the support to the project around 2003 due to the uncertainty of Thai DNA approval at that time.

Bagasse Price (Baht/tonne)	200	225	250	275	300
Project IRR	10.17%	9.01%	7.79%	6.49%	5.07%

Rice Husk Price (Baht/tonne)	560	630	700	770	840
Project IRR	8.44%	8.12%	7.79%	7.46%	7.11%

Investment Cost (US\$ 1,000)	36,753	38,795	40,837	42,878	44,920
Project IRR	9.57%	8.65%	7.79%	6.98%	6.22%

The calculation that supports the sensitivity analysis is provided in *Attachment6 – SensitivityAnalysis.pdf*. (see also the excel spreadsheet in *Attachment17 – PhuKhieo_IRRcalculation.xls*)

4. The validation of the input values for the IRR calculation should be further explained, in particular the price paid for bagasse as the baseline assumes that excess bagasse is left to decay.

Phu Khieo Bio-Energy Co., Ltd. is a separate legal entity to UFIC sugar mill, and is a subsidiary with separate operations. Phu Khieo has entered into a commercial contract to buy bagasse from UFIC sugar mill, and also to sell electricity and steam to UFIC sugar mill, as shown in the supported document *Attachment7 – BagasseSupplyAgreement.pdf*. (Please see article 3 Payment, which also refers to Appendix B for reference bagasse price.)

The agreed price of 250 Baht/tonne of bagasse ⁽¹⁾ paid by Phu Khieo to UFIC sugar mill reflects the intrinsic value of the bagasse, as stated in the baseline scenario, where 94% of the bagasse would be used for onsite cogeneration, while only 6% would be left to decay due to insufficient power plant capacity (See also *Table 8*).

Table 8 Production and Utilisation of Bagasse, at UFIC sugar mill, Chaiyapoom, 2001 – 2003

Phu Khieo	Cane crushing	Bagasse produced	Bagasse used	Bagasse leftover
	<i>tonnes</i>	<i>tonnes</i>	<i>tonnes</i>	<i>tonnes</i>
2001	2,464,155	667,047	649,984	17,063
2002	2,925,769	809,560	753,144	73,479
2003	2,916,192	799,037	758,210	40,827
Annual Average	2,768,705	758,548	720,446	43,790

Source: baseline table on p.45 of the PDD (Annex 3 Baseline Information)

Proof of payment is provided in *Attachment8 – InvoiceBagasse_PK-UFIC Mar2007.pdf*, which shows the amount of 167,912.61 tonnes of bagasse that UFIC sold to Phu Khieo Bio-Energy Co., Ltd. during March 2007 at unit price of 250 Baht/tonne bagasse. The total sum of 41,978,152.50 Baht was to be paid to UFIC sugar mill.

⁽¹⁾ Bagasse from UFIC sugar mill is supplied to Phu Khieo via conveyor belts because Phu Khieo is right next to UFIC sugar mill. Thus transportation is not included in this price. Quantity of bagasse supply is not committed in this agreement.

This 250 Baht/tonne was neither agreed at an exaggerated price. Phu Khieo also bought additional bagasse from other suppliers. *Attachment9 – ContractBagasseSale_PK-KasetPhol.pdf* exhibits the Contract of Bagasse Sale made between Kaset Phol Sugar Ltd. (a separate sugar mill not related to Mitr Phol Group) and Phu Khieo Bio-Energy Co., Ltd. with an agreed price of 320 Baht/tonne not including transport cost. Proof of payment for 5,610.25 tonnes of bagasse at 320 Baht/tonne that Phu Khieo bought from Kaset Phol during 16 – 28 October 2006, amounting to 1,795,280 Baht was provided in *Attachment10 – BagassePaymentKasetphol_Oct2006.pdf*. The transportation of bagasse from Kaset Phol to Phu Khieo added additional 280 Baht per tonne of bagasse as shown in *Attachment 11 – TransportationBagasse.pdf*.

The price of supplementary fuel assumed in the IRR also reflects the market price. For instance, the price paid for rice husk from Mee Chai Rice Mill in nearby province as of 20 June 2007 was 0.67 Baht/kg or 670 Baht/tonne (not including transport), as shown in cash receipt in *Attachment12 – Receipt_RiceHusk.pdf*.

Investment cost is also an important item in the IRR calculation. The actual investment cost to Phu Khieo project was much higher than estimated in the financial model. *Attachment13 – BalanceSheet_PK2005.pdf* shows that the total non-current assets of Phu Khieo Bio-Energy Co., Ltd. as at 31 October 2005 was 2,009 million Baht (or US\$46.72 million assuming 43Baht/US\$ as in the financial model), of which 1,627 million Baht was machinery and equipments and 337 million Baht was plants.

The purchase price of electricity sold to EGAT in the IRR calculation was based on EGAT's announcement on Purchase of Power from Small Power Producers with Firm Contract Using Renewable Energy, dated 1 August 2001, as shown in *Attachment14 - EGAT_SPP_PurchasePrice.pdf*. (page 32/35 of this document) This tariff is also confirmed in the Attachment No.2 to PPA between EGAT and Phu Khieo Bio-Energy Co., Ltd., as shown in *Attachment15 - PPA_PurchasePrice.pdf*.

The purchase price of electricity and steam sold to UFIC was also substantiated by the Utilities Supply Agreement between Phu Khieo Bio-Energy Co., Ltd. and UFIC, dated 18 April 2003, as exhibited in *Attachment 16 – UFIC_UilitiesSupplyAgreement.pdf*. As shown in *Appendix A* of this agreement, the electricity payment was agreed at 1.70 Baht/kWh as in the IRR calculation, while the agreed price for steam in *Appendix B* of this agreement was between 13.35 – 17.26 Baht/ton which is lower than assumed in the IRR calculation of 33.22 Baht/ton.

Therefore, the price of bagasse, rice husk, investment cost, electricity and steam price sold to EGAT and UFIC assumed in the feasibility study reflected the reality and should be considered as conservative, because the project IRR would have been even lower, had the price of bagasse or the investment cost been assumed to be higher in the IRR calculation. For transparency, the IRR calculation file in excel format is also provided in *Attachment17 – PhuKhieo_IRRcalculation.xls*.