

ជំពូក ១០

ការវិភាគសេដ្ឋកិច្ច

Economic Analyses

ជំពូកទី ១០

ការវិនិយោគសេដ្ឋកិច្ច និងតំលៃបរិស្ថាន

១០.១ ការវិនិយោគសេដ្ឋកិច្ច និងតំលៃបរិស្ថាន

ការវាយតំលៃបរិស្ថាន និងសង្គមលើគម្រោងវិនិយោគសំរាប់អភិវឌ្ឍន៍វារីអគ្គិសនីស្ទឹងអាតែខេត្តពោធិ៍សាត់ របស់ក្រុមហ៊ុន CHD ដែលក្រុមហ៊ុនបានឱ្យ SAWAC Consultants for Development ធ្វើការសិក្សាស្រាវជ្រាវនោះរួមមានតំលៃបរិស្ថានរូបសាស្ត្រ បរិស្ថានជីវសាស្ត្រ និងបរិស្ថានសង្គមដើម្បីរកឱ្យឃើញថាគម្រោងត្រូវបំពេញបន្ថែមនូវតំលៃបរិស្ថានលើការវិនិយោគនេះ ។ ការប៉ះពាល់ដល់ធនធានបរិស្ថានរូបសាស្ត្រវាជាកត្តាមួយដែលពាក់ព័ន្ធនឹងឱ្យប៉ះពាល់ធនធានបរិស្ថាន ជីវសាស្ត្រ និងសេដ្ឋកិច្ច-សង្គមខាងក្រោមនេះ ជាតម្លៃប្រមាណដែលគណនាទៅតាមទិន្នន័យដែលបានសិក្សារួមទាំងទិន្នន័យពីស្ថាប័ននានា និងអង្គការសង្គមស៊ីវិលមួយចំនួនផងដែរ ។

១០.១.១ ការវិនិយោគសេដ្ឋកិច្ចនៃធនធានព្រៃឈើ

យោងតាមការសិក្សាគំរូបព្រៃឈើដែលប៉ះពាល់ដោយសារគម្រោង និង ទិន្នន័យតំលៃសេដ្ឋកិច្ចរបស់ព្រៃឈើដែលចេញផ្សាយដោយ CDRI ឆ្នាំ ២០០៦ យើងយកធ្វើការគណនាតំលៃបាត់បង់ព្រៃឈើសរុបដូចមានក្នុងតារាងខាងក្រោម ។

តារាង ៦៥: ការវិនិយោគសេដ្ឋកិច្ចសរុប នៃការបាត់បង់ព្រៃឈើក្នុងតំបន់គំរោងក្នុងខេត្ត

បរិយាយ	តំលៃប្រមាណ (USD/ha)	ចំហុំ (ha.)	សរុប (USD)	សំគាល់
ព្រៃស្រោង និង ព្រៃល្បាយស្រស់	៣៧៥ ^(១)	៣.៨៨៩.១២	១.៤៥៨.៤២០	ព្រៃស្រោង៣៨៨៤.១២ ហិ.ត និងព្រៃល្បាយស្រស់ ៥៣.៩ ចាត់ជាព្រៃស្រោងដែរ
ព្រៃពាក់កណ្តាលស្រោង	២៤៧ ^(១)	១១៩.៨០	២៩.៥៩១	តំលៃយកតាម CDRI
ព្រៃល្បាយបួស្សី	៣៦៨ ^(២)	៧០.៤៤	២៥.៩២២	តំលៃយកតាមការប្រៀបធៀបដីស៊ីតេមាឌ
ព្រៃគម្ពោធន	១២៨ ^(២)	១០៨.៤៥	១៣.៨៧២	តំលៃយកតាមការប្រៀបធៀបដីស៊ីតេមាឌ
សរុប(USD)			១.៥២៧.៨១៥	តំលៃនេះរួមទាំងតំលៃការប្តូរផងដែរ

(១) ជាព័ត៌មាន Baseline survey ដែលបានសិក្សា និងចេញផ្សាយដោយ CDRI ឆ្នាំ២០០៦

(២) មានបង្ហាញនៅក្នុងជំពូក២

១០.១.២ ការវិនិយោគសេដ្ឋកិច្ចនៃបរិស្ថានធនធានជលផល

ផ្អែកតាមការសិក្សាបរិមាណផលចាប់ និងតម្លៃបច្ចុប្បន្នរបស់ត្រី យើងអាចប៉ាន់ប្រមាណប្រាក់ចំណូលពីការនេសាទដូចមានបង្ហាញក្នុងតារាងខាងក្រោម :

តារាង ៦៦: ការវិនិយោគសេដ្ឋកិច្ចប្រាក់ចំណូលពីការនេសាទប្រភេទត្រី

ប្រាក់ចំណូលនៃមុខរបរនេសាទបន្ទាប់បន្សំ តំបន់គំរោង		ភាគរយ នៃបរិមាណផលចាប់ (កំណត់ ដោយអ្នកនេសាទ ចំនួន៦១ គ្រួសារ)	ចំណូលពីការនេសាទត្រីពីតំបន់គំរោង	
ឆ្នាំសិក្សា	បរិមាណផលចាប់តាមបណ្តាឆ្នាំ		តម្លៃបច្ចុប្បន្ន គិតមធ្យម	ចំណូលសរុប (ដុល្លារអាមេរិក)
(១)	(២)	(៣)	(៤)	(៥)
២០០៩	៣៦.៦៧៦	-	១.៧៥\$/គក្រ	៦៤.១៨៣

២០១០	៣១.១៧៥	១៥% នៃឆ្នាំ២០០៩	១.៧៥\$/គម្រ	៥៤.៥៥៦
២០១១	១២.៤៧០	៦០% នៃឆ្នាំ២០០៩	១.៧៥\$/គម្រ	២១.៨២៣
ចំណូលអប្បបរមា ឆ្នាំ២០១១				២១.៨២៣
ចំណូលអតិបរមា ឆ្នាំ២០០៩				៦៤.១៨៣
ចំណូលមធ្យម/ឆ្នាំ គិតពីឆ្នាំ២០០៩-២០១១				៤៣.០០៣

តារាង ៦៧: ការវិនិយោគប្រមូលនិយមចុះប្រាក់ចំណូល ឬកើនឡើងពីការទេសាទ ក្នុងដំណាក់កាលសាងសង់

ការថយចុះ ឬកើនឡើងប្រាក់ចំណូល	2009-2010	2010-2011
អ្នកទេសាទឃុំអូរសោម	-9,628\$	-32,733\$
ចំនួនអ្នកទេសាទសរុបប្រចាំឆ្នាំ	167 គ្រួសារទេសាទ	167 គ្រួសារទេសាទ
គិតចំណូលថយចុះក្នុង១គ្រួសារទេសាទតាមបណ្តាឆ្នាំ	-58\$	-196\$
គិតចំណូលថយចុះក្នុង១គ្រួសារទេសាទក្នុងដំណាក់កាលសាងសង់គម្រោង	- US\$254/គ្រួសារទេសាទ	

១០.១.៣ ការវិនិយោគប្រមូលនិយមសេដ្ឋកិច្ច-សង្គម

តំលៃនៃការប៉ះពាល់ដល់សេដ្ឋកិច្ច-សង្គម គឺគណនាទៅតាមការប៉ះពាល់ជាក់ស្តែង ដូចជាការប៉ះពាល់ដល់ ដីស្រែ ចំការ ដីបុស្ស ដីបញ្ចុះសត ដីភូមិ ដីព្រៃការពារក្រវាញរបស់សហគមន៍ឃុំអូរសោម ផ្ទះសំបែង សំណង់អចលនទ្រព្យដទៃទៀត និងដំណាំផ្សេងៗ របស់ប្រជាពលរដ្ឋដែលរងផលប៉ះពាល់ដោយសារគម្រោង។ តំលៃនេះមានចែងលំអិតក្នុងផែនការផ្លាស់ប្តូរលំនៅដ្ឋាន រាវតំរំតំរោង។

តារាង ៦៨: ការវិនិយោគប្រមូលនិយមសំណង់សំណងចេញដំណើរការដោយសារគម្រោង

Description	Status of tree	Unit	Rate US\$	Quantity	Cost US\$
Compensation for Land					
Agricultural rice land		m ²	0.15	12,265	1,840.00
Agricultural Chamkar land		m ²	0.15	176,709	26,506.00
Residential (development relocation site)		m ²	0.50	10,000	5,000.00
Bos-land		m ²	0.08	167,165	13,373.00
O Saom Cardamom Community Forest		m ²	0.04	276,100	11,044.00
O Saom Village Burial Land		m ²	0.3	24,558	7,367.00
Sub-Total (1)					65,130
Compensation for Houses					
New House (Type 2D) construction		m ²	3000	4	12,000
Sub-Total (2)					12,000
Other Structures					
Chicken pen		Unit	30	2	60
Rice Barn		Unit	40	1	40
Sub-Total (3)					100
Economic Trees					
Durian	Productive	Tree	40	0	0
	None Productive	Tree	20	39	780
Mango	Productive	Tree	25	25	625
	None Productive	Tree	12.5	24	300
Jack Fruit	Productive	Tree	25	25	625
	None Productive	Tree	12.5	36	450
Sour Custard Apple	Productive	Tree	5	14	70
	None Productive	Tree	2.5	0	0
Coconut	None Productive	Tree	14	19	266
Logan	None Productive	Tree	14	8	112
Cashew tree	Productive	Tree	8	3	24
Rambutan Tree	Productive	Tree	25	28	700

Description	Status of tree	Unit	Rate US\$	Quantity	Cost US\$
Orange Tree	Productive	Tree	18.8	15	282
	None Productive	Tree	9.4	8	75.2
Lemon	None Productive	Tree	10	2	20
Guava	Productive	Tree	3	15	45
Areca	Productive	Tree	10	12	120
Papayas	Productive	Tree	15	23	345
Sapodilla	Productive	Tree	7	10	70
Custard Apples	Productive	Tree	3	7	21
Banana	Productive	clump	3	111	333
Sugar Can	Productive	clump	0.5	1348	674
Dragon fruit	Productive	clump	0.3	22	6.6
Lemon Grass	Productive	clump	0.3	80	24
Pine Apples	Productive	clump	0.5	120	60
Sub-Total (4)					6,028
Allowance					
Disruption Allowance		HH	40	37	1,480
Allowance for Vulnerable Groups		HH	150	6	900
Transportation Allowance		HH	40	4	160
Sub-Total (5)					2,540
Income restoration program					
Compensation for losing rice one year		HH	413	13	5,369
Sub-Total (6)					5,369
SUM (1)+(2)+(3)+(4)+(5)+(6)					91,167
Incremental Administration Costs (15%)			0.15		13675
Total					104,842
Contingencies (20%)			0.2		20,968
Grand Total					125,810

សំគាល់: ទិន្នន័យពីផែនការផ្លាស់ប្តូរនៅដ្ឋានរបស់ក្រុមហ៊ុន CHD ឆ្នាំ ២០១១

១០.១.៤ ការវិភាគតម្លៃ នៃផលប៉ះពាល់បរិស្ថានអវិជ្ជមាន និងថវិកាស្តារបរិស្ថាន

តារាង ៦៩: ការវិភាគតម្លៃ នៃផលប៉ះពាល់បរិស្ថានអវិជ្ជមាន

តម្លៃសេដ្ឋកិច្ចនៃការ បាត់បង់ព្រៃឈើក្នុងតំបន់គំរោង រួមទាំងតំលៃការប្តូរផលដៃ (USD)/Year	រយៈពេល៦ឆ្នាំ	ផលប៉ះពាល់អវិជ្ជមាននិងអាចស្តារឡើងវិញរយៈពេល៦ឆ្នាំ ក្រោយ ពីអនុវត្តតាម ផ.គ.ប និងការចំណេញពីតំលៃការប្តូរ ប្រៀបធៀប ជាមួយការប្រើឥន្ធនៈក្នុងការផលិតថាមពលគគ្គិសនី (US\$)	សរុប (US\$)
-1,527,815.00	-7,639,075.00	8,010,275	954,210
ការបាត់បង់ប្រាក់ចំណូលផលផល មធ្យម/ឆ្នាំ គិតពីឆ្នាំ២០០៥-២០១១ (US\$)	រយៈពេល៥ឆ្នាំ	ក្រោយរយៈពេលសាងសង់ ការប៉ះពាល់នេះនឹងអាចស្តារឡើងវិញ ដោយ មូលនិធិជលផលរួមមានការបង្កើតសហគមន៍ចិញ្ចឹមត្រីក្រុមអធិការកិច្ច ជលផល និងសង់ស្ថានីយ៍បង្កាត់ពូជត្រីរយៈពេល ៥ឆ្នាំ ។ បញ្ជាក់: តាមការវិភាគសេដ្ឋកិច្ចការស្តារផ្នែកផលផលនេះ អាចមានប្រសិទ្ធភាពជាង ។	សរុប (US\$)
-8,472	-42,361	256,361	204,739
ការប៉ះពាល់ដីថ្មី ជួសម្សែង និង ដំណាំ	ក្នុងដំណាក់កាលប្រតិបត្តិផែនការគំរោង ដោយសារ ការដកស្រង់ទឹកក្នុងអាងទី១ ។		-125,810
សរុប			1,033,139

បញ្ជាក់ :

- លទ្ធផលនៃការជ្រើសរើសតម្លៃ Carbon Dioxide ក្នុងអង្គសិក្ខាសាលាថ្ងៃ ០៨ ខែវិច្ឆិកា ឆ្នាំ២០១១ បានកំណត់យកតម្លៃ អប្បបរមា ៥.៧ ដុល្លារ/ត. ព្រោះថា ប្រទេសកម្ពុជាមិនអាចកែច្នៃបានដោយខ្លួនឯងទេ គឺត្រូវពឹងផ្អែកលើអ្នកវិនិយោគ ។

- ការកំណត់តម្លៃសេដ្ឋកិច្ចព្រៃឈើ គឺដឹកស្រង់ចេញពីឯកសារ: Natural forest benefits and economic analysis of natural forest conversion in Cambodia – working papaer 33, December 2006

១០.២ ផលចំណេញ ព័ត៌មាន

១០.២.១ ហេដ្ឋារចនាសម្ព័ន្ធ ដែលបានទទួល និងគ្រោងទទួលព័ត៌មាន

គំរោងនេះ ក្រុមហ៊ុនបានស្តារផ្លូវចាស់ និង សាងសង់ ថ្មី រួមមានជាប្រភេទផ្លូវក្រាលគ្រួសក្រហម ដែលមានទទឹងជាមធ្យម ៧ ម ។

តារាង ៧០: ប្រាក់សាងសង់ផ្លូវ

#	Road	Length (km)
1	Road Rehabilitation of Reusseï Chrum Check Point - CHDHK field Office	21.51
2	Road Rehabilitation of Damnak Kbaun - Kbal Chhay Road	1.43
3	New Construction of Kbal Chhay Road - Boat/ Ferry Cock	5.96
4	New Construction of Reusseï Chrum Check Point- O Saom Substation Road	24.24
	Total Atay Road	53.14
5	New Construction O Krabey Ngaob Road	15.24
6	New Construction Replacement O Saom Pramaoy Road	11.31
	Total Rehabilitation Road	23
	Total New Construction Road	57

សំគាល់: ក្នុងតារាងនេះមិនបានបញ្ចូលការស្តារផ្លូវពី ប្រមោយ-អូរសោម ៣០គ.ម មុនសាងសង់គម្រោងទេ ។

- ក្រុមហ៊ុននឹងធ្វើការស្តារតំបន់ទឹកធ្លាក់ឆ្នាក់ឆ្ងាយប្រហែល ដើម្បីបង្កើតជាតំបន់ទេសចរណ៍ទៅផ្ទៃអនាគត ។
- ប្រជាពលរដ្ឋនឹងទទួលបានភ្លើងប្រើប្រាស់ដោយឥន្ធនៈថ្លៃថោក ។
- កាត់បន្ថយការកាប់បំផ្លាញព្រៃឈើ ដោយប្រជាពលរដ្ឋប្តូរទំលាប់ឈប់ប្រើអុសសំរាប់ចំអិនមកប្រើប្រាស់អគ្គិសនីវិញ ។

១០.២.២ ថវិកាសំរាប់កិច្ចការ និងស្តារបរិស្ថានរបស់គំរោង

គំរោងស្តារបរិស្ថានរបស់គំរោង BOT នៃវារីអគ្គិសនីស្ទឹងអាតមានសរុបចំនួន ៣.០៩១.២៥០ ដុល្លារអាមេរិក សំរាប់ដំណាក់កាលសាងសង់រយៈពេល ៤ឆ្នាំ និងសំរាប់ដំណាក់កាលក្រោយសាងសង់ រយៈពេល ៥ ឆ្នាំ ។

នៅក្នុងកញ្ចប់ថវិកានេះ មានថវិកាសំរាប់បង្កើតព្រៃសហគមន៍ចំនួន ៤០.០០០ ដុល្លារអាមេរិក និង ថវិកាសំរាប់ឧបត្ថម្ភដល់អ្នកល្បាត ២០នាក់ (១១នាក់សំរាប់ដែលជីវិតសត្វព្រៃភ្នំសំរាប់ស្រែកស្រងូនបរិស្ថាន និង ៩នាក់សំរាប់ព្រៃការពារក្រវាញកណ្តាល និងព្រៃការពារដងទង់របស់រដ្ឋបាលព្រៃឈើ) ចំនួន ៣៣១.២០០ដុល្លារអាមេរិក សំរាប់រយៈពេល ៦ឆ្នាំ ដោយឧបត្ថម្ភក្នុងម្នាក់ ២៣០ ដុល្លារអាមេរិកក្នុង១ខែ ។ (មើលលំអិតតារាង ៧១ ចំណុច iv) សំគាល់: យោងតាមសិក្ខាសាលា ថ្ងៃ ០៨ ខែវិច្ឆិកា ឆ្នាំ២០១១ នៅតំបន់គំរោងគ្មានដីសំរាប់ដាំឈើឡើងវិលទេ ។ ដូចនេះត្រូវបង្កើតសហគមន៍ការពារព្រៃឈើជំនួសវិញ រួមទាំងមានអ្នកល្បាតទៀតផង ។

ថវិកាសំរាប់បង្កើតស្ថានីយបង្កាត់ពូជត្រីនៅអូរសោមមានចំនួន ៥០.០០០ ដុល្លារអាមេរិក. ថវិកាសំរាប់បង្កើតសហគមន៍ចិញ្ចឹមត្រីក្នុងបែរចំនួន ៩៥.០០០ ដុល្លារអាមេរិក និង ថវិកាចំនួន ៦៩.០០០ ដុល្លារអាមេរិក ឧបត្ថម្ភដល់បុគ្គលិក ២ នាក់ និងអ្នកអធិការកិច្ចផលផលចំនួន ៥នាក់សំរាប់រយៈពេលប្រាំឆ្នាំ(២៣០ដុល្លារ/ខែ ។ នៅមានមូលនិធិជាច្រើនទៀតសំរាប់កិច្ចការពារធនធានបរិស្ថានរូបសាស្ត្រមានលំអិតនៅតារាងទី៧១ ។

តារាង ៧៦: ការវិនិយោគសម្រាប់ការសាងសង់ និងប្រតិបត្តិការប្រតិបត្តិការ (ការវិនិយោគសម្រាប់ការសាងសង់ និងប្រតិបត្តិការប្រតិបត្តិការ)

Items	Units	Rate	Total	Growing rate	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
A.1. Carbon revenue for Hydropower										
1- Atay Hydropower- loss forest-loss carbon (HCO)	year	329,916								
2- Fuel (FCO)	year	499,082								
3- Carbon revenue comparing with (HCO)-(FCO)	year	169,166			169,166	169,166	169,166	169,166	169,166	169,166
4- Sales revenue of carbon	US\$	5.7			964,246	964,246	964,246	964,246	964,246	964,246
Sub-Total Sales revenue of carbon	US\$		5,785,476							
Cash flows of forest projection										
A.2. Forest Protection revenue										
1- Total Protection Area (ha) for 5 communities		5,000								
2- NPV of the Protected Forest	\$US/ha	375.0		10%	187,500	206,250	226,875	249,563	274,519	301,971
3- Yield of carbon dioxide (s)	T/ha	78.78		10%	393,900.00	43,329.00	47,661.90	52,428.09	57,670.90	63,437.99
4- Sales revenue of carbon	US\$/T	5.7			224,523	246,975	271,673	298,840	328,724	361,597
Sub-total Forest Protection Revenues	US\$		3,179,009		412,023	453,225	496,548	548,403	603,243	663,567
A.2. Fish product and Protection revenue										
Amount of cage culture of Fish Communities	Cage	100								
Fish product cost by cage culture	Kg/cage	320			32,000	32,000	32,000	32,000	32,000	32,000
Average Fish cost per cage culture	\$US/Cage	560	336,000		56,000	56,000	56,000	56,000	56,000	56,000
Growing wild fish	Kg/year	12,470		15%	1,871	2,151	2,474	2,845	3,272	3,762
Average Fish cost	\$US	1.75	28,654		3,273	3,764	4,329	4,978	5,725	6,584
Amount of Brood stock	Brood	500,000			500,000	550,000	605,000	665,500	732,050	805,255
Brood stock cost	\$US/brood	0.025	96,445	10%	12,500	13,750	15,125	16,638	18,301	20,131
Sub-total Fish product and Protection Revenues			461,099		71,773	73,514	75,454	77,616	80,026	82,715
Total cash flow	US\$		9,425,584		1,448,042	1,490,986	1,538,248	1,590,265	1,647,515	1,710,528
A.3. Cash Outflows										
1. Forest Protection Community Development Costs	US\$		40,000		24,000	16,000				
2. Patrolling cost	US\$/year	55,200	331,200		35,200	55,200	55,200	55,200	55,200	55,200
3. Cage culture community	\$US/year	19,000	95,000		19,000	19,000	19,000	19,000	19,000	19,000
4. Fish hatchery cost			50,000		50,000					
5. Two staffs and 5 inspector	\$US/year	13,800	69,000		13,800	13,800	13,800	13,800	13,800	13,800
Sub-Total Cash Outflows			585,200		162,000	104,000	88,000	88,000	88,000	88,000
B. Cash outflows environmental negative impact										
Forest										
Decrease fish yield from 2009 to 2011	US\$/year	1,527,815	7,639,075		1,527,815	1,527,815	1,527,815	1,527,815	1,527,815	1,527,815
Average Fish cost	Kg	24,206								
Resettlement cost	\$US/Kg	1.75	42,361		8,472	8,472	8,472	8,472	8,472	8,472
Sub-Total cost of environmental negative impact	US\$		125,810		125,810	125,810	125,810	125,810	125,810	125,810
Total cashout flow	US\$		7,807,246		1,662,097	1,536,287	1,536,287	1,536,287	1,536,287	1,536,287
A.3 Cash Surplus/deficit			8,392,446		1,824,097	1,640,287	1,624,287	1,624,287	1,624,287	1,624,287
					376,055	149,201	86,039	34,023	23,228	1,655,328
					- 376,055	-525,356	-611,395	-645,418	-622,190	1,033,139

តារាង ៧២: សង្ខេបការវិនិយោគ ហិរញ្ញវត្ថុ និងសេដ្ឋកិច្ចសំរាប់គម្រោង BOT

ល.រ	ប៉ារ៉ាម៉ែត្រ	Unit	តម្លៃ	ផ្សេង ៗ
១	ENPV	USD million	៥០៥.៥១	ដោយអត្រាការបញ្ចុះ ១០%
២	FIRR	%	៥.០០	Capital in cash
៣	EIRR	%	៣៣.១៧	
៤	ថ្លៃភ្លើង	USC/kWh	៦.០១	
៥	Payback period	Year	១៣.៤០	

Source: CHD Atay financial proposal page 21; 22 and Table 1-8 below.

Draft

១០.៣ ការវិនិយោគសាងសង់កម្មសិទ្ធិប្រតិបត្តិសរុបសម្រាប់ BOT

តារាង ៧៣: សង្ខេបវិនិយោគសាងសង់កម្មសិទ្ធិប្រតិបត្តិសរុបសម្រាប់ Build-Operation-Transfer (BOT)

		10-USD																	
		TABLE 1 Cost estimate table																	
No	ITEM	year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16	year 17	
No	ITEM	year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34	
a	Electricity Generated	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060	47060
b	Ratio of electricity used by plant (%)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
c	Power supply capacity (10 ⁶ kw.h)	1397673	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Loss rate in leased-line (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Electricity sent into grid (10 ⁶ kw. h)	1397673	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	Total cost	46169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1	Depreciation cost	19877	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.2	Maintenance cost	8945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.3	Salary, welfare, labor protection, payment, endowment, ect.	2970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4	Material cost	225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	Cost of operation and maintenance	290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.6	Water resource cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.7	Replacement of equipment	1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.8	Other cost	3600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.9	Flood control cost	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1	Insurance premium	4139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.1	Financial cost	4472	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.1.1	Interest expense for invest loan	4141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.1.2	Interest expense for flow fund loan	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.1.3	Interest expense for short term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Operating cost	21820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 2 Profit and loss table

No	ITEM	10 ⁶ USD																	
		year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16	year 17	
a	Electricity sent into grid (10kw.h)	1397673	0	0	0	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	
b	Energy tariff sent into grid excluding tax (USD/MW.h)	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	
1	Revenue	83949	0	0	0	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	
2	Value-added tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	Energy licence fee	524	0	0	0	17	17	17	17	17	17	17	17	17	17	17	17	17	
4	Total cost	46169	0	0	0	2842	2662	2501	2359	2332	2117	2012	1915	1824	1738	1656	1578	1567	
5	Total Profit (1-3-4)	37256	0	0	0	-81	119	280	422	549	664	769	866	957	1043	1125	1203	1214	
6	Remedied previous losses	163	0	0	0	0	163	0	0	0	0	0	0	0	0	0	0	0	
7	Fund needed to pay income tax (5-6)	37093	0	0	0	-61	-45	280	422	549	664	769	866	957	1043	1125	1203	1214	
8	Profit tax (20%)	6538	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	Net Profit after profit tax (5-8)	30718	0	0	0	-61	113	280	422	549	664	769	866	957	1043	1125	1203	1214	
10	Withholding tax	4935	0	0	0	102	109	123	133	142	149	154	159	162	136	136	135	137	
	Tax rates of withholding on interest (14%)	616	0	0	0	102	93	83	74	65	56	47	37	28	19	10	1	1	
	Tax rates of withholding on Profit after tax (14%)	1161	0	0	0	17	30	59	77	93	108	121	134	134	117	126	135	136	
11	Profit available for distribution (9-10)	25782	0	0	0	-163	9	157	289	407	515	615	707	795	888	976	1065	1154	
12	Payable profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	Profit undistributed (11-12)	25782	0	0	0	-163	9	157	289	407	515	615	707	795	888	976	1065	1154	
14	The repayment of remaining loan principle	1965	0	0	0	-163	0	38	114	176	225	264	295	320	340	356	0	0	
15	Dividend (13-14)	23817	0	0	0	0	0	9	119	171	232	291	351	412	475	538	601	664	
16	Max. rate of return on equity	13.24%	0.00%	0.00%	0.00%	0.00%	0.00%	1.99%	2.91%	3.86%	4.84%	5.85%	6.87%	7.91%	8.97%	9.97%	10.99%	11.99%	
17	Max. rate of return on equity during repayment period of loan	4.29%	0.00%	0.00%	0.00%	0.00%	0.00%	1.99%	2.91%	3.86%	4.84%	5.85%	6.87%	7.91%	8.97%	9.97%	10.99%	11.99%	
18	Max. rate of return on equity after repayment period of loan	18.42%																	

No	ITEM	10 ⁶ USD																	
		year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34	
a	Electricity sent into grid (10kw.h)	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	46589	
b	Energy tariff sent into grid excluding tax (USD/MW.h)	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	60.06	
1	Revenue	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	
2	Value-added tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	Energy licence fee	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
4	Total cost	1569	1547	1541	1849	1849	1849	1849	1849	1849	1849	1849	1849	1849	1849	1849	1849	1849	
5	Total Profit (1-3-4)	1222	1234	1238	932	932	932	932	932	932	932	932	932	932	932	932	932	932	
6	Remedied previous losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	Fund needed to pay income tax (5-6)	1222	1234	1238	932	932	932	932	932	932	932	932	932	932	932	932	932	932	
8	Profit tax (20%)	244	247	248	186	186	186	186	186	186	186	186	186	186	186	186	186	186	
9	Net Profit after profit tax (5-8)	977	983	987	990	990	990	990	990	990	990	990	990	990	990	990	990	990	
10	Withholding tax	137	138	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	
	Tax rates of withholding on interest (14%)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Tax rates of withholding on Profit after tax (14%)	137	138	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	
11	Profit available for distribution (9-10)	840	844	848	851	851	851	851	851	851	851	851	851	851	851	851	851	851	
12	Payable profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	Profit undistributed (11-12)	840	844	848	851	851	851	851	851	851	851	851	851	851	851	851	851	851	
14	The repayment of remaining loan principle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15	Dividend (13-14)	840	844	848	851	851	851	851	851	851	851	851	851	851	851	851	851	851	
16	Max. rate of return on equity	14.00%	14.08%	14.14%	14.19%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	
17	Max. rate of return on equity during repayment period of loan	14.00%	14.08%	14.14%	14.19%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	
18	Max. rate of return on equity after repayment period of loan	14.00%	14.08%	14.14%	14.19%	15.66%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%	

TABLE 3 Loan repayment calculation table

No	ITEM	10* USD															
		year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	Total
1	Loan and repayment with interest																
1.1	Total loan with interest at the beginning of the year	0	3327	8781	12422	3914	12649	11384	10119	8854	7589	6324	5060	3795	2630	1265	
1.1.1	Principal	0	3243	8530	11494	2316	12649	11384	10119	8854	7589	6324	5060	3795	2630	1265	
	Short-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.1.2	Interest in construction period	0	84	391	328	1596											
1.2	Long-term loan in this year	3243	5147	3104	324												12318
1.4	Interest of long-term loan in this year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.5	Interest of short-term loan in this year	84	307	537	667	724	658	592	526	460	395	329	263	197	132	66	5937
1.6	Repayment for principal of long-term loan in this year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.7	Repayment for principal of short-term loan in this year	0	0	0	0	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	13914
1.8	Repayment for interest of long-term loan in this year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.9	Repayment for interest of short-term loan in this year	0	0	0	0	724	658	592	526	460	395	329	263	197	132	66	4341
2	Capital return resource	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.1	Profit undistributed can be used to repay the capital in this year	0	0	0	0	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	13914
2.2	Accumulation can be used to repay the capital in this year	0	0	0	0	163	0	38	114	176	225	264	295	320	340	356	1965
2.3	Accumulation and profit welfare fund distilled in this year	0	0	0	0	1428	1265	1222	1151	1089	1040	1001	970	945	925	909	11949
2.4	Short-term loan used to repay the capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Loan repayment period (year) 15.00 From the beginning of the commencement year

TABLE 4 Capital resource and operation table

ITEM	10* USD																			
	Total	year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16	year 17	year 18	year 19
Capital resource	78749	4753	7792	5202	2251	1381	1441	1507	1576	1639	1704	1770	1836	1902	1967	2033	2099	2099	2099	2099
Total Profit	37256	0	0	0	-0	-61	118	280	422	549	664	769	866	957	1043	1125	1203	1214	1214	1214
Depreciation cost	19877	0	0	0	0	1442	1323	1227	1151	1089	1040	1001	970	945	925	909	896	885	885	885
Amortization charge	1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long-term loan	13914	3327	5454	3641	1491															
Short-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loan for flow fund	84	0	0	0	0	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Principal	5999	1426	2337	1560	675	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery of residual value of fixed asset	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery of flow capital	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment for fixed assets	18281	4669	7485	4664	1463															
Interest during construction period	1596	84	307	537	667															
Flow fund	120	0	0	0	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income tax	6538	0	0	0	0	0	0	0	0	0	0	0	0	0	209	225	241	243	243	243
Repayment for principal of long-term loan	13914	0	0	0	0	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265	1265
Repayment for principal of short term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment for principal of flow fund loan	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equity profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withholding tax	4935	0	0	0	102	109	123	133	142	149	154	159	162	162	162	162	162	162	162	162
Surplus Capital	33281	0	0	0	14	67	115	174	232	291	351	412	475	538	601	664	727	790	853	916
Total surplus capital	0	0	0	0	14	81	201	375	597	897	1248	1661	2135	2493	2901	3354	3817	4280	4743	5206

ITEM	10* USD																
	year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34
Capital resource	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099	2099
Total Profit	1222	1228	1234	1238	632	932	1796	1796	1799	2099	2099	2099	2099	2099	2099	2099	2099
Depreciation cost	877	871	865	861	667	657	657	657	657	657	657	657	657	657	657	657	657
Amortization charge	0	0	0	0	300	300	300	300	300	300	300	300	300	300	300	300	300
Long-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Short-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ITEM	year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34
Loan for flow fund																	
Principal																	
Recovery of residual value of fixed asset	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery of flow capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment for fixed assets																	
Interest during construction period																	
Flow fund																	
Income tax	244	246	247	248	186	186	186	360	360	420	420	420	420	420	420	420	420
Repayment for principal of long-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment for principal of short term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment for principal of flow fund loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equity profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withholding tax	137	138	139	139	105	105	105	202	202	236	236	236	236	236	236	236	236
Surplus Capital	1717	1715	1713	1712	1807	1807	1807	1537	1537	1443	1443	1443	1443	1443	1443	1443	1479
Total surplus capital	8060	9776	11489	13201	15009	16816	18524	20161	21698	23141	24885	26028	27472	28915	30358	31802	33281

TABLE 5 Balance sheet

No	ITEM	year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16	year 17
1	Assets	4753	12544	17746	19937	18559	17313	16205	15229	14372	13622	12872	12414	11944	11378	10877	11704	12538
1.1	Total current assets	0	0	0	120	134	201	120	120	120	120	120	120	120	120	120	120	120
1.1.1	Current assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.2	Total surplus capital	0	0	0	0	14	81	201	315	607	897	1248	1661	2135	2493	2301	4624	6343
1.2	Project under construction	4753	12544	17746	19877	18545	17112	16004	15229	14372	13622	12872	12414	11944	11378	10877	11704	12538
1.3	Net value of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Debt and right of investor	4753	12544	17746	19937	18559	17313	16205	15229	14372	13622	12872	12414	11944	11378	10877	11704	12538
2.1	Total current liabilities	0	0	0	84	94	84	84	84	84	84	84	84	84	84	84	84	84
2.2	Short-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3	Long-term loan	3327	8781	12422	13914	12549	11384	10119	8954	7589	6324	5060	3795	2530	1265	0	0	0
2.4	Total debt	3327	8781	12422	13998	12733	11468	10203	8938	7673	6408	5144	3879	2814	1349	84	84	84
2.4.1	Right of investor	1426	3763	5324	5999	5836	5945	6002	6291	6688	7213	7828	8536	9330	10029	10793	11620	12454
2.4.2	Total accumulation and public welfare fund	1426	3763	5324	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999
2.4.3	Total profit undistributed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.4.3	Equity-debt ratio (%)	70.00	70.00	70.00	70.00	68.57	66.24	62.96	58.69	53.39	47.05	39.65	31.24	21.88	11.85	0.77	0.72	0.67

No	ITEM	year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34
1	Assets	13378	14222	15071	15921	16862	17803	18744	20281	21818	23261	24705	26148	27592	29035	30478	31922	33281
1.1	Total current assets	8180	9896	11609	13321	15129	16836	18744	20281	21818	23261	24705	26148	27592	29035	30478	31922	33281
1.1.1	Current assets	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
1.1.2	Total surplus capital	8060	9776	11489	13201	15009	16816	18624	20161	21698	23141	24585	26028	27472	28915	30358	31802	33281
1.2	Project under construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.3	Net value of fixed assets	5197	4327	3461	2600	1734	867	0	0	0	0	0	0	0	0	0	0	0
2	Debt and right of investor	13378	14222	15071	15921	16862	17803	18744	20281	21818	23261	24705	26148	27592	29035	30478	31922	33281
2.1	Total current liabilities	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
2.2	Short-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3	Long-term loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.4	Total debt	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
2.4.1	Right of investor	13294	14138	14987	15837	16478	17119	17760	18997	20234	21677	23121	24564	26008	27451	28894	30338	31781
2.4.2	Principal	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999	5999
2.4.3	Total accumulation and public welfare fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.4.3	Total profit undistributed	7285	8139	8988	9839	10479	11120	11761	12998	14235	15678	17122	18565	20009	21452	22895	24339	25782
2.4.3	Equity-debt ratio (%)	0.63	0.59	0.56	0.53	0.51	0.49	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.31	0.29	0.28	0.28

TABLE 6 Cash flow statement of total investment

NO	ITEM	10*USD																	
		year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16		
1	Cash inflow	84069	0	0	0	2756	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798		
1.1	Revenue	83949	0	0	0	2756	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798		
1.2	Recovery of residual value of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1.3	Recovery of flow capital	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2	Cash outflow	52219	4669	7485	4664	1593	79	90.4	818	878	837	844	849	854	857	1039	1056		
2.1	Investment for fixed assets	18281	4669	7485	4664	1433													
2.2	Flow capital	120	0	0	0	120	0	0	0	0	0	0	0	0	0	0	0		
2.3	Operating cost	21820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2.4	Energy licence fee	524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2.5	Income tax	6538	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2.6	Withholding tax	4935	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3	Net cash flux (before income tax)	38389	-4669	-7485	-4664	-1593	207	1994	1981	1970	1961	1954	1949	1945	1941	1967	1968		
4	Net cash flux (after income tax)	31850	-4669	-7485	-4664	-1593	2007	1994	1981	1970	1961	1954	1949	1945	1941	1759	1743		
5	Total net cash flux (after income tax)	-4669	-12153	-16678	-18401	-16384	-14400	-8488	-10443	-8488	-5533	-2840	-699	1060	2803	4530			

No	ITEM	104USD																	
		year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34	
1	Cash inflow	2798	2798	2798	2756	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	
1.1	Revenue	2798	2798	2798	2756	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	
1.2	Recovery of residual value of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3	Recovery of flow capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	Cash outflow	1077	1079	1080	1092	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	
2.1	Investment for fixed assets																		
2.2	Flow capital																		
2.3	Operating cost	578	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678	
2.4	Energy licence fee	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
2.5	Income tax	244	246	247	248	186	166	166	166	166	166	166	166	166	166	166	166	166	
2.6	Withholding tax	137	138	139	139	105	105	105	105	105	105	105	105	105	105	105	105	105	
3	Net cash flux (before income tax)	1966	1965	1965	1964	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	
4	Net cash flux (after income tax)	1722	1719	1718	1717	1512	1512	1512	1512	1512	1512	1512	1512	1512	1512	1512	1512	1512	
5	Total net cash flux (after income tax)	7976	5695	11413	13129	14641	16152	17665	18906	20148	21596	23043	24491	25939	27387	28835	30283	31850	

Calculation index

After income tax

Before income tax

Financial internal rate of return (%)

7.6

8.22

Recovery period of static investment (year)

13.4

TABLE 7 Cash flow statement of equity

NO	ITEM	104USD																	
		year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16	year 17	
1	Cash inflow	84069	0	0	0	2756	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	
1.1	Revenue	83949	0	0	0	2756	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	
1.2	Recovery of residual value of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3	Recovery of flow capital	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	Cash outflow	98206	1426	2337	1580	575	3754	2679	2624	2567	2508	2447	2386	2324	2440	2391	1075	1079	
2.1	Investment for construction (equity)	5963	1426	2337	1580	539													
2.2	Flow capital (equity)	36	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	
2.3	Operating cost	21820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.4	Repayment for principal of construction investment loan	13914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.5	Repayment for interest of construction investment loan	4341	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.6	Repayment for interest of flow capital loan	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.7	Energy licence fee	524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.8	Income tax	6538	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.9	Withholding tax	4935	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

NO	ITEM	year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34	
3	Net cash flux (before income tax)	-1426	-2337	-1560	-575	14	67	119	174	232	291	351	412	475	567	632	632	1964	
4	Net cash flux (after income tax)	25863	-1426	-2337	-1560	-675	-4	67	119	174	232	291	351	412	475	567	632	632	1964
5	Total net cash flux (after income tax)	1426	2337	1560	985	5989	-5985	-5918	-5798	-5624	-5392	-5102	-4751	-4338	-3861	-3506	-3098	-1375	344
1	Cash inflow	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2918
1.1	Revenue	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2798	2918
1.2	Recovery of residual value of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.3	Recovery of flow capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Cash outflow	1081	1083	1085	1086	1291	1291	1291	1561	1581	1355	1355	1355	1355	1355	1355	1355	1355	1355
2.1	Investment for construction (equity)																		
2.2	Flow capital (equity)																		
2.3	Operating cost	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678
2.4	Repayment for principal of construction investment loan																		
2.5	Repayment for interest of construction investment loan																		
2.6	Repayment for interest of flow capital loan	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2.7	Energy licence fee	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
2.8	Income tax	244	246	247	248	186	186	360	360	360	420	420	420	420	420	420	420	420	420
2.9	Withholding tax	137	138	139	139	105	105	202	202	202	236	236	236	236	236	236	236	236	236
3	Net cash flux (before income tax)	1961	1961	1960	1694	1694	1694	1694	1597	1597	1863	1863	1863	1863	1863	1863	1863	1863	1983
4	Net cash flux (after income tax)	1717	1715	1713	1507	1507	1507	1507	1237	1237	1443	1443	1443	1443	1443	1443	1443	1443	1563
5	Total net cash flux (after income tax)	2061	3777	5490	7202	8710	10217	11725	12962	14199	15642	17086	18529	19973	21416	22859	24303	25866	

Calculation index
Financial internal rate of return (%)
9.00

Before income tax
9.96

TABLE 8 Economy cash flow statement (input-output method)

ITEM	104 USD																	
	year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	year 11	year 12	year 13	year 14	year 15	year 16	year 17	
I. Benefit flux	total	321465	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. Revenue got by electricity sale		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Recovery of residual value of fixed assets		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		321465	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II. Cost flux		17367	4435	7111	4431	1390	0	0	0	0	0	0	0	0	0	0	0	0
1. Investment for fixed assets		20575	0	0	0	638	638	638	638	638	638	638	638	638	638	638	638	638
2. Operating cost		37942	4435	7111	4431	1390	638	638	638	638	638	638	638	638	638	638	638	638
Total		283523	4435	7111	4431	1390	638	638	638	638	638	638	638	638	638	638	638	638
III. Net cash flux		308098	-4435	-7111	-4431	-1390	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077
IV. Economic internal rate of return		33.17%																
V. Economy net present value (i=10%)		50651																

ITEM	104 USD																
	year 18	year 19	year 20	year 21	year 22	year 23	year 24	year 25	year 26	year 27	year 28	year 29	year 30	year 31	year 32	year 33	year 34
I. Benefit flux	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715
1. Revenue got by electricity sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Recovery of residual value of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715	10715
II. Cost flux	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. Investment for fixed assets	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638
2. Operating cost	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638
Total	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276	1276
III. Net cash flux	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077
IV. Economic internal rate of return	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077
V. Economy net present value (i=10%)	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077	10077