



Capacity development and strengthening for energy policy formulation
and implementation of sustainable energy projects in Indonesia

Capacity development and strengthening for energy policy formulation and implementation of sustainable projects in Indonesia **CASINDO**

DELIVERABLE NO. 7:

REPORT ON THE SELECTION OF SMKs FOR THE PROJECT'S TARGET PROVINCES AND WORKING AGREEMENTS BETWEEN SMKs & THE PROJECT

Eric Kamphuis(ETC Nederland)

Iman Permana(TEDC)



**Bilateral energy cooperation between
Indonesia and the Netherlands BECIN**



**NL Agency
Ministry of Foreign Affairs**

MAY 2010

Preface

This report on the selection of SMKs is deliverable No. 7 of the project ‘Capacity development and strengthening for energy policy formulation and implementation of Sustainable energy projects in IN-DOnesia (CASINDO)’. The CASINDO project aims to establish a self-sustaining and self-developing structure at both the national and regional level to build and strengthen human capacity to enable the provinces of North Sumatra, Yogyakarta, Central Java, West Nusa Tenggara and Papua to formulate sound energy policies and to develop and implement sustainable energy projects. The CASINDO project is funded by NL Agency and implemented by a consortium co-ordinated jointly by the Indonesian Ministry of Energy and Mineral Resources and the Energy research Centre of the Netherlands (ECN), comprising the following organisations:

- Indonesian Ministry of Energy and Mineral Resources, Jakarta.
- Muhammadiyah University of Yogyakarta, Yogyakarta.
- Diponegoro University, Semarang.
- University of Sumatra Utara, Medan.
- University of Mataram, Mataram.
- University of Cenderawasih, Jayapura.
- Institute of Technology of Bandung (ITB), Bandung.
- Technical Education Development Centre (TEDC), Bandung.
- Technical University Eindhoven, Eindhoven.
- ETC-Nederland, Leusden.
- MVV-Decon, Bonn
- Energy research Centre of the Netherlands ECN, Petten.
- Biomass Technology Group BTG, Enschede.
- AdvanceConsulting, Bennekom

The sole responsibility for the content of this report lies with the authors. It does not represent the opinion of NL Agency and NL Agency is not responsible for any use that may be made of the information contained herein.

Abstract

This report explains the stepwise approach taken in the selection of SMKs for CASINDO’s target provinces. For this, data of the Indonesian Ministry of Education were used, site visits were made and interviews were conducted. The exercise resulted in ranking the 11 best SMKs observed. After the selection of the SMKs a joint meeting with TEDC, ETC/TTP, and relevant Indonesian governmental agencies was organised for kicking off the activities. Terms for working agreements between the SMKs and CASINDO have been formulated as well as a work planning.

Contents

List of tables	4
1. Introduction	5
2. Selection procedure	6
2.1 Analysis key SMK data of Ministry of Education	6
2.2 Selection of the SMKs to be visited	6
2.3 Visits to SMKs and local authorities	6
2.4 Final selection of the SMKs and their concentration RETs	8
3. Working agreement between SMKs and CASINDO	9
4. Final remarks	10
Appendix A Data regarding selection SMK for the execution renewable energy programme	11
Appendix B Ranking SMKs visited in June 2009	17
Appendix C The assessment of demand for SMK graduates in RE&EE	18
Appendix D Collaboration agreement between 11 SMKs and CASINDO programme 2010-2011	20

List of tables

Table 2.1	<i>Visited SMKs per province</i>	7
Table 2.2	<i>11 SMKs - REP proposed for selection</i>	8

1. Introduction

Delivery 7 reports on the 1st steps taken within the framework of the implementation of WP3: ‘Development of skilled manpower for renewable energy and energy efficiency’. In CASINDO’s project document was mentioned that before starting working with SMKs in the project provinces, it was needed to:

- To carry out an assessment of the need for specific Renewable Energy technologies (RET) in the curriculum and related learning materials of the SMKs in the project provinces.
- To select 2 SMKs per province based on the experiences with the integration of RET in 2 SMKs (i.e. SMKN 2 Pengasih Kulonprogo (Yogyakarta) and SMKN 2 Kuripan Lombok Barat (Nusa Tenggara Barat, see Project document p. 28).

It should be mentioned that the final results of the needs assessment and the selection were integrated in the Project’s Delivery 4 (Inception Report) in Paragraph 4.2. This report serves to explain more in detail the approach followed.

2. Selection procedure

2.1 Analysis key SMK data of Ministry of Education

Before paying visits to the SMKs in the project provinces a first assessment was made of a gross list of SMKs with the help of key SMK data that were acquired through the website of the Direktorat Pembinaan [Sekolah Menengah Kejuruan](http://www.ditpsmk.net) of the Ministry of Education) (SMK -Vocational and Technical Schools- (www.ditpsmk.net)). The following steps were taken:

- The total of 2,251 SMKs (public –Negeri- and private –Swasta-) in all project provinces was identified.
- From this total all SMKs that covered the competency group Technology and Engineering were set apart; this resulted in 359 SMKs.
- After that a first assessment was done on the quality of the schools by looking at: accreditation quality levels (A – D) per stream (teaching subject), ISO 9001:2000 certification, number and enrolment of students (broken down in female and male), and the number of teachers per teaching subject.

2.2 Selection of the SMKs to be visited

Within this first quality assessment of these 359 SMKs was only looked at the public schools (Negeri SMK), as these schools fall primarily under CASINDO. The assessment resulted in a total of 17 SMKs to be visited. Most of the visits were concentrated on the provinces Northern Sumatra, Central Java and Papua, as earlier experiences from the 3 EWG projects regarding the integration of RET in SMKs were already gathered in the provinces Yogyakarta and Nusa Tenggara Barat. With 2 SMKs from these provinces (SMKN 2 Pengasih Kulonprogo – Yogyakarta- and SMKN 2 Kuripan Lombok Barat -Nusa Tenggara Barat-) was already concretely cooperated. These two schools were therefore automatically included in the CASINDO project in order to make maximum use of their pilot experiences; they were however visited as well.

2.3 Visits to SMKs and local authorities

The following table gives an overview what SMKs per province have been visited.

Table 2.1 *Visited SMKs per province*

Nr	Province	SMKN
	Northern Sumatra	
1		SMK Negeri 2 Doloksanggul
2		SMK Negeri 1 Balige
3		SMK Negeri 2 Rantau Utara
4		SMK2 Negeri Pematang Siantar
5		SMK Negeri 2 Tanjung Balai
6		SMK2 Negeri Medan
	Papua	
7		SMK3 Negeri Jayapura
8		SMK3 Negeri Merauke
	Central Java	
9		SMKN 1 kabupaten Blora
10		SMKN 1 kota Magelang
11		SMKN2 Salatiga
12		SMK Swasta Panca Bhakti, kab. Banjarnegara
	Yogyakarta	
13		SMKN 2 kota Yogyakarta
14		SMKN 2 Pengasih Kulonprogo
15		SKMN 3 Yogyakarta
	Nusa Tenggara Barat	
16		SMKN 3 kota Mataram
17		SMKN 2 Kuripan

All visits have taken place during the months June and July 2009. Each visit has taken 1- 1½ days; this time included not only viewing the school premises, but also interviews with the headmasters, teachers, and students. Part of the assessment was also the way these schools handled the school management in general, the organisation of the visits, the general shape of the buildings and equipments of the schools as well as the availability and transparency about the school's future planning. Besides the visits to the schools, relevant provincial and municipal authorities were visited and interviewed (provincial/municipal educational bureaus and in some mayors or governors). The results of all these visits were put in the comprehensive form 'Data Regarding Selection SMK for the Execution Renewable Energy Programme (see Appendix A).

For each SMK a total score was given, based on the sub scores per each main component of the form (i.e. A. Bureaucracy Support; B. Potential of SMK; C. Potential of Natural Resources and Societal Need; D. School Readiness for Implementing REP -Renewable Energy Program-). See for the scores of all SMKs visited Appendix B.

In addition to the information the filled out forms has given, a separate short needs assessment was done in the period 8 – 11 September 2009. This was done in phone interviews based on the interview form 'The Assessment of Demand for SMK Graduates in RE&EE' (see Appendix C). Aside of this round of interviews internet data per province were obtained about their current and planned future energy profiles.

Both forms were elaborated by TEDC and commented by ETC/TTP. In all visits a team of 2 assessors filled out the forms. All outcomes have been put together. Based on the total result TEDC and ETC/TTP made a proposal for the selection of 11 SMKs that was informed the Direktorat Pembinaan [Sekolah Menengah Kejuruan](#) (SMK) and the local educational bureaus with copies to all provincial educational bureaus and all visited schools.

2.4 Final selection of the SMKs and their concentration RETs

In total 11 SMKs have been selected for participation in CASINDO. This meant one SMK more than the project document envisaged. This was due to the fact that in the provinces Northern Sumatra and Central Java good perspectives for partnerships were identified, reason why in these provinces 3 SMKs instead of 2 have been selected. For the province Nusa Tenggara Barat one SMK was selected, due to the fact that in the other provinces already 10 SMKs were selected; the number of 10 SMKs is in accordance with the project document.

Based on the information gathered it became clear that the SMKs clearly indicated to opt for a broad introduction in a range of Renewable Energy Technologies (RETs) in the SMK's first two school years of the four-year educational trajectory; in the last two school years on maximally two RETs will be focussed. In these two final years, in-depth training is to be provided with sound practical components. The following table summarises the selection proposal for incorporating Renewable Energy Programmes (REP) in the SMKs.

Table 2.2 11 SMKs - REP proposed for selection

Province	Name Candidate SMK Terpilih	Offered Concentration	Remarks
Papua	SMKN 3 kota Jayapura	1.MHP, 2. PV	
	SMKN 3 kabupaten Merauke	1. PV, 2.WE	
North Sumatra	SMKN 2 Doloksanggul, kab. Humbang Hasundutan	1.MHP,2. PV	
	SMKN 1 Balige, kabupaten Toba Samosir	1.MHP, 2.Biomass	
	SMKN 2 Rantau Utara, kabupaten Labuhan Batu	2.Biomass, 2.PV	
NTB	SMKN 2 Kuripan, kab. Lombok Barat	1.MHP, 2.Biomass	REP Pilot SMK
Yogyakarta	SMKN 2 kota Yogyakarta	1.PV, 2.WE	
	SMKN 2 Pengasih, kab. Kulonprogo	1.MHP, 2.Biomass	REP Pilot SMK
Central Java	SMKN 1 kabupaten Blora	1.Biomass, 2.PV	
	SMKN 1 kota Magelang	1.MHP, 2.Biomass	
	SMK Swasta Panca Bhakti, kab. Banjarnegara	1.MHP, 2.Biomass	

The table shows that there are:

- seven SMKs to conduct MHP,
- six SMKs to conduct PV,
- two SMKs to conduct WE,
- seven SMKs to conduct Biomass.

The final proposal for selection, including the indication of the concentration RETs, was submitted to the CASINDO project. After SenterNovem's consent with the project's Inception Report (October 2009) the selection could be made official.

3. Working agreement between SMKs and CASINDO

After the approval of the selection of the 11 SMKs by SenterNovem, already done before the issuing of the Inception Report, a start up meeting with these SMKs was organised on 29-30 October 2009. The meeting was organised by TEDC in cooperation with ETC/TTP in Bandung. In the meeting also inputs by the Ministry of Education (Directorate SMK) and the Directorate General of Electricity and Energy Utilisation (DGEEU) of the Ministry of Energy and Mineral Resources (MEMR) were planned. The meeting was considered as the 1st meeting of the Technical Working Group VII: *TWG VII -SMK Renewable energy and Energy efficiency training modules-*. On the meeting has been separately reported¹.

The goals of the workshop were:

1. To facilitate liaison between CASINDO, Directorate SMK and DGEEU on the context in which the realisation of WP3 and WP6 should take place.
2. To formulate, agree upon a cooperation agreement between CASINDO and the 11 SMKs in developing and implementing a study program in RET for the SMK's
3. To compile a plan of action plan for 11 SMKs in the development and implementation of the RET programs.

All goals of the workshop have been achieved. The liaison between CASINDO, Directorate SMK and DGEEU was well realised resulting in the invitation from the Directorate SMK to TEDC to come forward with a proposal regarding a central broad based curriculum for RET in SMK within the framework of the curriculum platform 'Spectrum' of the Ministry of Education (Directorate SMK) that covers all vocational education. In the meeting was agreed upon a cooperation agreement and CASINDO. Emphasis in this agreement was given to the Services to be given by TEDC to the SMK and the Services of the SMK to be given to TEDC. Appendix D gives the general format of the Cooperation Agreement in English and Bahasa; in this the mentioned Services are concretely indicated. Per April 2010 all SMKs have signed the cooperation agreements.

Finally a plan of action was developed in the workshop. This action plan was later adapted by TEDC to fit the tight timeframes. The planning emphasises firstly the ToTs for the SMK teachers in the different RETs at two levels: general competencies and specific competencies. In the end of 2010 and 2011 adaptations in the operational curricula of the SMKs will be handled. The changed approach is explained in CASINDO's 1st Progress Report.

Recent information learned that the SMKs Jayapura (Papua) and Balige (Northern Sumatra) indicated to be ready to open the admission of new students for first RET programs in per July 2010.

¹ WORKSHOP/TWG VII MEETING 29 – 30 October 2009, Eric Kamphuis, Willem van Burgsteden, October 2009

4. Final remarks

Based on the signed agreements and the established planning TEDC and ETC/TTP will take care of regular monitoring of the activities at SMK level. This will be done through school visits and periodical reporting to be done by the SMKs. Two TWGVII are planned: one in October 2010 and the other in mid 2011.

The approach followed with the selection of the SMKs has proven to be robust and has provided clear feedback to the SMKs that were of the selection process. In the development of the approach to the roll-out of the SMK-oriented training and curriculum development activities to 4 SMKs per project province, as is envisaged in D12 of the project document, the used selection method can be replicated.

The selected SMKs need to be provided with hard copies of the teaching modules for teachers and students. No budgetary reservation was made for this purpose; this issue needs proper attention.

Appendix A Data regarding selection SMK for the execution renewable energy programme

Name of SMK :
 Address :
 Date of visit :

Data appendixes should be provided by school

1. Identity of School (include area and structure of organization)
2. Data of Administration Facilities
3. Data of Study Programmes and Facilities
4. Data of Students (include social and economy of their parents)
5. Data of Alumna (include unemployed, employee, and continue study)
6. Data of Headmaster
7. Data of Teachers (General Studies and Vocational Studies)
8. Data of School Committee
9. Data of Industrial Cooperation
10. Data of School Achievements
11. Data of mayor/ head of EB address

Accreditation ratings per stream:

- | | |
|------------------------------------|---------------|
| 1. Plumbing and Sanitation | A, B, C, or n |
| 2. Wood Construction and Finishing | A, B, C, or n |
| 3. Surveying and Mapping | A, B, C, or n |
| 4. Simple Building Construction | A, B, C, or n |
| 5. Masonry and concrete | A, B, C, or n |
| 6. Bulding Drawing | A, B, C, or n |
| 7. Electrical Utility | A, B, C, or n |
| 8. ELectrical Distribution | A, B, C, or n |
| 9. Industrial Electric | A, B, C, or n |
| 10. Power Generation | A, B, C, or n |
| 11. Machining | A, B, C, or n |
| 12. Welding | A, B, C, or n |
| 13. Machining-tools | A, B, C, or n |

ISO 9001:2000 (Not) Certified

n : exist, but has not been accredited

- : not existing

A, B, C are levels of accreditation, of which A is the best

Rating: 1 – weak 2 – sufficient 3 – good 4 - excellent

A. BUREAUCRACY SUPPORT

No	Aspect of Potential	Assessment Scale				Remark
		1	2	3	4	
1	Performance of Provincial Educational Bureau					
	- Hospitality					
	- Leadership					
	- Commitment					
	- Management					
2	Understanding and Commitment to Renewable Energy Program					
	- Head of Province EB					
	- Deputy of EB for SMK					
	- Staff of EB for SMK					
3	Province Policy Support to Implement REP at SMK					
	- Strategic Plan of Province Government					
	- Strategic Plan of Province Edu. Bureau					
	- Commitment support through new policy					
4	Performance of Kota/ Kabupaten Educational Bureau					
	- Hospitality					
	- Leadership					
	- Commitment					
	- Management					
5	Understanding and Commitment to REP					
	- Head of City/ Sub Province EB					
	- Deputy of EB for SMK					
	- Staff of EB for SMK					
6	City/ Kab Policy Support to Implement REP at SMK					
	- Strategic Plan of City/ Kab. Government					
	- Strategic Plan of City/ Kab. Edu. Bureau					
	- Commitment support through new policy					
	CONCLUSION (min – max 20 - 80 points)					

B. POTENTIAL OF SMK

No	Aspect of Potential	Assessment Scale				Remark
		1	2	3	4	
1	Appearance of school physical					
	- Building					
	- Environment					
	- Facilities					
	- Land					
2	Performance of School Management					
	- Hospitality					
	- Leadership					
	- Administration/ management					
	- Discipline					
3	Performance of Electrical Study Programme					
	- Readiness of Facility					
	- Teaching learning Materials					
	- Practical Materials					
	- Teaching Learning Process					
	- Teachers Performance					
	- Students Performance					
4	Performance of Mechanical Study Programme					
	- Readiness of Facility					
	- Teaching learning Materials					
	- Practical Materials					
	- Teaching Learning Process					
	- Teachers Performance					
5	Performance of Civil Study Programme					
	- Readiness of Facility					
	- Teaching learning Materials					
	- Practical Materials					
	- Teaching Learning Process					
	- Teachers Performance					
6	Performance of Study Programme					
	- Readiness of Facility					
	- Teaching learning Materials					
	- Practical Materials					
	- Teaching Learning Process					
	- Teachers Performance					
7	Understanding and Enthusiasm to Renewable Energy Technology					
	- School Management					
	- Teachers					
	- Students					
	- School Committee					
	CONCLUSION (min – max 38 - 152 points)					

C. POTENTIAL OF NATURE RESOURCES AND SOCIETY NEED

No	Aspect of Potential	Assessment Scale				Remark
		1	2	3	4	
1	Potential of Micro Hydro Power					
	- Sources of water					
	- Debit and Head					
	- Geography Conditions					
2	Potential of Photo Voltaic Power					
	- Solar Radiation					
	- Geography Conditions					
	- Demography					
3	Potential of Wind Energy					
	- Potential of Wind Energy					
	- Geography Conditions					
	- Demography					
4	Potential of Biomass					
	- Potential of Biomass/ Biogas					
	- Geography Conditions					
	- Demography					
5	Society Needs of Electricity					
	- Electrification					
	- Electricity Needs					
	- Demography					
	- Social Economic					
	- Profession of People					
	- Manufacture Industry Support					
	CONCLUSION (min – max 19 - 76 points)					

D. SCHOOL READINESS FOR IMPLEMENTING REP

No	Aspect of Potential	Assessment Scale				Remark
		1	2	3	4	
1	School Management Policy					
	- Develop new policy to implement REP as new study program/ or and kompetensi kealian with new approach					
	- Propose REP as new study program/ or and kompetensi kealian					
2	Sharing Cost					
	- Practical material delivery					
	- Copying teaching learning materials					
	- Extra salary of teachers during development					
	- Cooperation in Forum Energi Daerah					
	- Participation in REP development					
3	Implement of REP					
	- in Local Content					
	- in Extra Curricula					
	- Inserted to KTSP of Mechanical, Electrical and Civil					
	- Propose REP as new study program/ vocational competency					
	- Using Multi Discipline Team Teaching					
	- Using Multi Discipline Moving Class					
	- Implement broad based Curriculum of REP					
3	REP Teacher Training					
	- Provide two candidates of REP teachers of each Mechanical, Electrical and Civil study programme to be trained					
	- No change participants during training phases					
	- Employing and facilitating REP teachers to develop and implement REP at SMK					
	CONCLUSION (max - min 17 – 68 points)					

CONCLUSION: Min – max 94 – 376 points

xxx points

Ranking place

SEQUENCE: PRIORITY OF THIS SMK TO BE SELECTED IS 1ST - 2ND - 3RD - 4TH - 5TH - 6TH - 7TH - 8TH - 9TH - 10TH - 11TH

Date, Year

Asessor 1
Eric Kamphuis

Assessor 2
Iman Permana

Appendix B Ranking SMKs visited in June 2009

Ranking SMKs visited in June 2009

Nr	Province/SMK	Points
	<i>Province Northern Sumatra</i>	
1	SMK Negeri 2 Doloksanggul	264
2	SMK Negeri 1 Balige	237
3	SMK Negeri 2 Rantau Utara	232
4	SMK2 Negeri Pematang Siantar	202
5	SMK Negeri 2 Tanjung Balai	174
6	SMK2 Negeri Medan	172
	<i>Province Papua</i>	
7	SMK3 Negeri Jayapura	230
8	SMK3 Negeri Merauke	227

The **first three schools** were selected to participate in CASINDO for the province of Northern Sumatra Utara (3 SMK) and **two schools** for the Province Papua (2 SMK).

The choice for 3 SMKs in Northern Sumatra stems from the relative high number of schools that teach in the competency group Technology and Engineering (94 out of total of 359); for **Papua** this number is 23.

Ranking SMKs visited in July 2009

Nr	Province/SMK	Points
	<i>Province Central Java</i>	
1	SMKN 1 kota Magelang	297
2	SMKN 1 kabupaten Blora	274
3	SMK Swasta Panca Bhakti, kab. Banjarnegara	224
4	SMKN2 Salatiga	219
	<i>Province Yogyakarta</i>	
5	SMKN 2 Pengasih Kulonprogo	265
6	SMKN 2 kota Yogyakarta	224
7	SMKN 3 Yogyakarta	196
	<i>Province Nusa Tenggara Barat</i>	
8	SMKN 2 Kuripan	262
9	SMKN 3 kota Mataram	259

The **first three schools** were selected to participate in CASINDO for the **province Central Java** (in this province are 155 SMKs that that teach in the competency group Technology and Engineering).

For the province of Yogyakarta two schools will participate (in Yogyakarta this number is: 34 SMKs); one of them, SMKN 2 Pengasih Kulonprogo, participates also due to its status as former pilot school.

For the **province Nusa Tenggara Barat SMKN 2 Kuripan** will participate as former pilot school. In this province 53 SMKs teach in the competency group Technology and Engineering. No other SMKs have been selected also due to the fact that in the other provinces already 10 SMKs were selected; the number of 10 SMKs is in accordance with the project document.

Appendix C The assessment of demand for SMK graduates in RE&EE

Data collection :	8, 9 September 2009
Data processing :	10 September 2009
Reporting :	11 September
Method :	Interview by phone
Interviewer :	5 persons, one person per province
Informen :	two groups of respondent for same questions <ul style="list-style-type: none"> • 12 Director selected SMK for REP • Each 3 different study program teachers (Civil, Mechanical, and Electrical) from 12 selected SMK for REP
Question :	5 groups for 12 questions

1.	<ul style="list-style-type: none"> - Mengapa Teknologi Energi Terbarukan sangat penting diajarkan di SMK....? - Apakah Bapak sudah mempertimbangkan pasar kerjanya di provinsi....., baik yang direncanakan oleh pemerintah maupun sektor swasta? - Why do you think the Renewable Energy Technology (RET) very important to be taught at your school? - Have you considered the labour market in province, both planned by government and private sector?
2.	<ul style="list-style-type: none"> - Apakah Bapak juga akan mengusulkan Teknologi Energi Terbarukan sebagai kompetensi keahlian baru di sekolah Bapak pada tahun ajaran 2010/ 2011? - Apa yang menjadi rasional/ pertimbangan Bapak? - Berapa kelas Teknologi Energi Terbarukan yang akan Bapak buka pada tahun ajaran 2010/2011? - Apakah bapak punya pendapat lain tentang strategi implementasi Teknologi Energi Terbarukan di sekolah Bapak? - Do you will also to propose RET as new study program at your school in learning year 2010/2011 - What is your rational/ considerations? - How many classes of RET will you open in learning year 2010/2011? - Do you have another opinion about implementation strategy of RET at your school?

3.	<p>Teknologi Energi Terbarukan bersifat multi disiplin dan lintas program studi.</p> <ul style="list-style-type: none"> - Apakah Bapak bersedia mengelola kurikulum Teknologi Energi Terbarukan secara Broad Based Curriculum, dimana semua dasar-dasar materi produktif diajarkan di kelas X dan XI, sedangkan konsentrasinya diajarkan di kelas XII? - Apakah Bapak bersedia mengelola pembelajaran Teknologi Energi Terbarukan secara team teaching dan moving class dengan memanfaatkan semua sumberdaya sekolah? - Kebijakan apa yang akan Bapak kembangkan untuk mendukung implementasinya? <p>RET has the character of multi-discipline and cross study program.</p> <ul style="list-style-type: none"> - Would you like to manage Curriculum of RET in accordance Broad Based Curriculum, where all basic subject will be taught in K X and K XI, whereas the concentration will be tough in K XII? - Would you like to manage teaching learning activities of RET in team teaching and moving class approach by exploit all school resources - What policy will you develop to support implementation of RET?
4.	<ul style="list-style-type: none"> - Seberapa besar prospek pasar kerja lulusan Teknologi Energi Terbarukan di propinsi? - Dapatkah Anda menjelaskan lebih spesifik pasar kerja Teknologi Energi Terbarukan antara proyek pemerintah dan proyek swasta? <ul style="list-style-type: none"> - How big labour market of RET graduation in province? - Could you explain labour market of RET more specific between government project and private sector project?
5.	<p>Bagaimanakah strategi bapak dalam memasarkan lulusan Teknologi Energi Terbarukan di propinsi?</p> <p>How is your strategy to market the graduation of RET in province?</p>

Appendix D Collaboration agreement between 11 SMKs and CASINDO programme 2010-2011

<u>COLLABORATION AGREEMENT</u>	<u>KESEPAKATAN KOLABORASI</u>
<p>THIS AGREEMENT is made BETWEEN:</p> <p>(1) ENERGY RESEARCH CENTRE OF THE NETHERLANDS, a Netherlands government sponsored research institute whose registered office is at Westerduinweg 3, P.O. Box 1, 1755 ZG Petten, the Netherlands; and</p> <p>(2) SMK a technical school at Jl., Indonesia</p> <p>BACKGROUND:</p> <p>The CASINDO project aims to build and strengthen human capacity both at the Ministry of Energy and Mineral Resources and in the target provinces North Sumatra, Central Java, Yogyakarta, West Nusa Tenggara and Papua. The capacity building activities will be conducted for national and regional policy makers, partner universities and 11 selected vocational schools (SKM) in the five target provinces. The CASINDO project is funded by the embassy of the Kingdom of the Netherlands and is jointly coordinated by Energy research Centre of the Netherlands (ECN) and the Indonesian Ministry of Energy and Mineral Resources.</p> <p>An important component of CASINDO concerns the introduction of training modules on renewable energy technologies and energy efficiency (RET & EE) at 11 selected SMKs in the five target provinces. This involves the development of curricula, syllabi and lesson modules, training of the SMK teachers and introducing the training modules at the SMK. This component of CASINDO will be implemented jointly by TEDC in Bandung and ETC Netherlands.</p> <p>A workshop was held on 29-30 October in Bandung with the Directors of the 11 SMKs</p>	<p>KESEPAKATAN INI dibuat ANTARA:</p> <p>(1) PUSAT PENELITIAN ENERGI BELANDA (Energy Research Centre of the Netherlands/ ECN), sebuah lembaga penelitian yang disponsori pemerintah Belanda, terdaftar resmi dan berkantor di Westerduinweg 3, P.O. Kotak 1, 1755 ZG Petten, Belanda; dan</p> <p>(2) SMK, sebuah SMK yang beralamat di Jl., Indonesia</p> <p>LATAR BELAKANG:</p> <p>Proyek CASINDO bertujuan membangun dan memperkuat kapasitas sumber daya manusia di Departemen Energy dan Sumber Daya Mineral Resources dan lima provinsi target: Sumatra Utara, Jawa Tengah, Yogyakarta, Nusa Tenggara Barat dan Papua. Kegiatan-kegiatan pembangunan kapasitas akan diselenggarakan oleh para pembuat kebijakan di tingkat nasional dan regional, universitas mitra dan 11 sekolah menengah kejuruan (SMK) yang terpilih di lima provinsi target. Proyek CASINDO dibiayai oleh Kedutaan Besar Kerajaan Belanda dan bersama-sama dikoordinir oleh ECN dan Departemen Energi dan Sumber Daya Mineral Republik.</p> <p>Satu komponen penting dari CASINDO adalah kepedulian untuk memperkenalkan modul-modul pembelajaran Teknologi Energi Terbarukan dan Efisiensi Energi (TET & EE) pada 11 SMKs terpilih di lima provinsi target. Kegiatan ini mencakup pengembangan kurikulum, silabus dan modul-modul pembelajaran, pelatihan guru SMK dan pembelajaran modul TET & EE di SMK. Komponen CASINDO ini akan diterapkan SMK bersama TEDC ETC Netherlands.</p> <p>Sebuah workshop telah dilaksanakan pada tanggal 29-30 Oktober di Bandung yang dihadiri 11 kepala SMK terpilih untuk</p>

<p>that have been selected for targeted action in CASINDO. The main purpose of the workshop was to:</p> <ol style="list-style-type: none"> 1. Formulate, agree on and sign a collaboration agreement between the CASINDO Programme and each of the 11 SMKs in developing and implementing an expertise competence in RET&EE for the SMK's. 2. Compile a plan of action plan for 11 SMKs in the development and implementation of the RET&EE programs. <p>WHEREAS:</p> <ol style="list-style-type: none"> A. The Parties wish to collaborate on a capacity development programme entitled CASINDO funded by the Dutch embassy in Jakarta; B. The Sponsor has made available a grant in respect of the Programme; C. The Parties agree to undertake the Programme as set out in this Agreement. <p>IT IS HEREBY AGREED as follows:</p> <p>The services that will be provided to the SMK include:</p> <ol style="list-style-type: none"> 1. Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Bidang Mesin dan Teknik Industri (Technical Education Development Centre/ TEDC) will monitor the implementation of the action plan established in the Workshop of 29-30 October, make adaptations in this plan if deemed needed and guide the SMKs in the fulfillment of the plan. 2. TEDC made the action plan that became the foundation for SMK actions. 3. TEDC will evaluate the proposed demonstration facilities from SMK 4. TEDC will develop the curriculum (Competency Standards and Basic Competencies/ SKKD) RET & EE and the syllabus model. 5. TEDC will study, develop and put forward a new RET&EE expertise compe- 	<p>melaksanakan kegiatan yang ditetapkan dalam CASINDO Tujuan utama workshop tersebut adalah:</p> <ol style="list-style-type: none"> 1. Merumuskan, menyepakati dan menandatangani perjanjian kolaborasi antara CASINDO Programme dengan setiap sekolah dari 11 SMKs dalam mengembangkan dan menerapkan kompetensi keahlian TET & EE di SMK. 2. Menyusun sebuah rencana rencana kegiatan untuk 11 SMKs dalam pengembangan dan implementasi program TET & EE. <p>DIMANA:</p> <ol style="list-style-type: none"> A. Para pihak ingin bekerja sama dalam program pengembangan kapasitas berjudul CASINDO yang dibiayai oleh Kedutaan Besar Belanda di Jakarta; B. Sponsor telah menyediakan dana bantuan/hibah untuk Program ini C. Para pihak setuju untuk melakukan Program sebagaimana dijelaskan di dalam Kesepakatan Kolaborasi ini. <p>BERIKUT INI KESEPAKATAN KOLABORASI :</p> <p>Layanan yang disediakan untuk SMK meliputi:</p> <ol style="list-style-type: none"> 1. Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Bidang Mesin dan Teknik Industri (Technical Education Development Centre/ TEDC) akan memantau implementasi dari rencana aksi (action plan) yang didirikan dalam Workshop 29-30 Oktober, membuat penyesuaian perencanaan jika dianggap perlu dan memandu SMK dalam pemenuhan rencana ini. 2. TEDC membuat rencana aksi yang dapat menjadi dasar bagi kegiatan-kegiatan SMK. 3. TEDC akan mengevaluasi fasilitas demonstrasi yang diusulkan oleh SMK 4. TEDC akan mengembangkan kurikulum (Standard Kompetensi dan Kompetensi Dasar/ SKKD) TET & EE dan model silabus. 5. TEDC akan menyelidiki, mengembangkan dan mengajukan kompetensi keahlian baru
---	---

<p>tence to Directorate PSMK.</p> <ol style="list-style-type: none"> 6. TEDC will invite the teachers for the training of RET & EE. 7. TEDC will cover all travel & accommodation expenses related to the training of the teachers. 8. TEDC team will give in-house training for specific competences at SMKs. 9. TEDC Team will give supervise to SMK in developing operational curriculum (KTSP) of RET&EE 	<p>TET & EE kepada Direktorat Pembinaan Sekolah Menengah Kejuruan (PSMK).</p> <ol style="list-style-type: none"> 6. TEDC akan mengundang guru untuk pelatihan TET & EE 7. TEDC akan membiayai perjalanan dan pemondokan yang berhubungan dengan pelatihan guru ini. 8. Tim TEDC akan memberikan in-house training untuk kompetensi spesifik di SMK. 9. Tim TEDC akan memberikan pendampingan kepada SMK dalam mengembangkan kurikulum tingkat satuan pendidikan TET & EE
<p>The SMK will provide the following services to the TEDC:</p> <ol style="list-style-type: none"> 1. SMK will participate in the TEDC activity in accordance with the program that was given by CASINDO 2. SMK will participate in the Competence Standards and Basic Competences (SKKD) development and validation 3. SMK participates in investigation, proposing and developing RET & EE as new expertise competence to Directorate PSMK. 4. SMK will provide the teachers to be trained and who will have a suitable background in RET &EE. 5. SMK will provide the student who will join the RET & EE program 6. SMK will carry out learning programs in RET &EE. 7. SMK will facilitate the in-house trainings offered by TEDC. 8. SMK will develop relations with regional education office, regional mining and energy office, local university, and other stakeholders to support the interests of RET & EE development at the level of the province. 9. SMK will develop operational curriculum (KTSP) of RET & EE expertise competence. 10. SMK will implement RET & EE expertise competence in the schools. 11. SMK will promote/socialize RET & EE to get support from stake holders 12. SMK will put forward demonstration facilities to TEDC in accordance with 	<p>SMK akan menyediakan layanan berikut kepada TEDC:</p> <ol style="list-style-type: none"> 1. SMK akan berpartisipasi aktif dalam kegiatan TEDC sesuai dengan program yang diberikan oleh CASINDO 2. SMK akan mengambil bagian dalam pengembangan dan pengesahan SKKD TET & EE 3. SMK turut ambil bagian dalam penyelidikan, pengusulan dan pengembangan TET & EE sebagai kompetensi keahlian baru kepada Direktorat PSMK. 4. SMK akan menyediakan guru untuk dilatih dan yang memiliki latar belakang pendidikan untuk TET & EE. 5. SMK akan menyediakan siswa yang akan bergabung dalam pembelajaran TET & EE. 6. SMK akan melaksanakan program pembelajaran TET & EE. 7. SMK akan memberikan kemudahan (fasilitasi) in-house training yang ditawarkan oleh TEDC. 8. SMK akan mengembangkan hubungan dengan dinas pendidikan dan dinas pertambangan dan energi di daerah, universitas lokal dan pemangku kepentingan lainnya untuk mendukung kepentingan pengembangan RET & EE di tingkat provinsi. 9. SMK akan mengembangkan KTSP kompetensi keahlian TET & EE 10. SMK akan menerapkan kompetensi keahlian TET & EE di sekolah. 11. SMK akan mempromosikan/memasyarakatkan TET & EE untuk mendapat dukungan dari pemangku kepentingan 12. SMK akan mengajukan fasilitas demonstrasi kepada TEDC sesuai dengan anggaran yang

<p>the budget that was provided by CASINDO.</p> <p>13. SMK will contribute the necessary budget direct related with school internal.</p> <p>14. SMK will report the activities to TEDC.</p>	<p>disediakan oleh CASINDO.</p> <p>13. SMK akan menyediakan imbal swadaya yang diperlukan dan berkaitan langsung dengan internal sekolah.</p> <p>14. SMK akan melaporkan kegiatan dan hasil-hasilnya kepada TEDC.</p>
<p>SIGNED for and on behalf of ECN:</p> <p>Name: Nico van der Linden Position: CASINDO Programme Manager</p> <p>Signature Date</p>	<p>SIGNED for and on behalf of the SMK:.....</p> <p>Name Jabatan : Kepala Sekolah</p> <p>Tandatangan Tanggal</p>