

PD-AAI-356

ISN - 263

497-0267

4970267005306

RURAL ELECTRIFICATION PROJECTS

INDONESIA



NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

JAKARTA, INDONESIA

NRECA TEAM REPORT

PDO

INDONESIA

(APRIL 1981)

M O N T H L Y R E P O R T

NRECA INDONESIAN TEAM REPORT

UNITED STATES AGENCY FOR
INTERNATIONAL DEVELOPMENT

Contract No. AID/ASIA CI347

Loan No. 497-T-052

IMPLEMENTING AGENCIES:

DIREKTORAT JENDERAL KOPERASI
Directorate General of Cooperatives

PERUSAHAAN UMUM LISTRIK NEGARA
National Electric Power Agency

CONSULTANTS:

National Rural Electric Cooperative Association
Management, Organization and Training

C.T. Main International, Inc.
Architect and Engineering

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DESCRIPTION AND OBJECTIVES OF PROJECT (DGC)

The Government of Indonesia (GOI) has initiated a demonstration rural electrification program which is planned to provide areawide electric power distribution in ten specified areas within the next four or five years. The objective of this program is to demonstrate conclusively that reliable electric service and the social and economic benefits that accrue therefrom can be made available to the very poor people at a price they are able to pay.

Three of the electrical distribution systems will be located on separate islands outside of Java and will be implemented through rural electric cooperatives organized by the Directorate General of Cooperatives (DGC). The National Electric Power Agency (PLN) operates an extensive electric system in Central Java, and is responsible for constructing, operating and maintaining the seven systems located on that island.

The U.S. Agency for International Development (USAID) is assisting the GOI in this demonstration by making available AID grant funds to provide organizational, management and technical advisory services. The National Rural Electric Cooperative Association (NRECA), through its International Programs Division, was contracted by AID to provide these services because of its demonstrated capability and experience in assisting rural electric cooperatives in developing nations throughout the world.

NRECA is working with the two separate agencies charged with implementing the project. Because of the different organization, management, training and experience of these two agencies, the services provided by NRECA differ in scope and location. The services for DGC include complete assistance in the organization of the individual cooperatives; including staffing patterns, job descriptions, cost accounting, O&M methods, training, planning, policies and procedures, housewiring and etc. The NRECA services and progress to date for the seven systems in Central Java are the subject of a separate report.

The three outer island projects are located on Central Lampung (South Sumatra), East Lombok, and Luwu (South Sulawesi) and are to be constructed and developed

by the member-consumers themselves through the organization of rural electric cooperatives. Each Cooperative will construct, own and operate a diesel generating plant to provide power for the distribution system. (The Canadian Government is assisting with the generating project.) A special agency known as the Project Development Office (PDO) under the Directorate General for Cooperatives (DGC) is the GOI implementing agency for the Cooperatives.

The key personnel which NRECA has agreed to furnish for the performance of this contract are as follows:

<u>NAME</u>	<u>TITLE</u>	<u>ADDRESS</u>
Peter McNeill	Team Leader	Pondok Indah Bukit Hijau VIII/31 PH: 761132
Lloyd Lake	Sr. RE Specialist	P.O. Box 88 Tanjungkarang Lampung PH: 0721-52058
Louie Sansing	Sr. RE Specialist	Jl. Dukuh Patra II/73 Jakarta Selatan PH: 824308 ext. 394
*Sam Adkins	Sr. RE Specialist	c/o C.T. Main Inc. Box 26 Semarang PH: 024-311832
Paul Swanson	Sr. RE Specialist	Kotak Pos 43 Ampenan Lombok PH: 0364-23517
John DeFoor	RE Specialist	c/o Bina Marga Office Jl. Imam Bonjol 8 Palopo, S. Sulawesi
Ray Shoff	Administrative/Finance Officer	Ratu Plaza Jl. Jenderal Sudirman PH: 712034

PLN Advisor

NRECA Team Activities

General --- The NRECA team was at full strength during this reporting period with three team members stationed at the Rural Electric (RE) Cooperative outer-island sites, and three team members assigned to the GOI Project Development office for Rural Electrification (PDO-RE) in Jakarta. Additional NRECA team support was provided by the Administrator of NRECA's International Program Division, Mr. Samuel Bunker, who was in Indonesia for one week of this reporting period.

Highlights of NRECA team activities, as related to USAID/NRECA contract scope of work, are enumerated below.

NRECA - Jakarta Activities

System organization --- The preparation of written Guidelines for the PDO-RE was a continuing activity during this reporting period. Two Guidelines were submitted in final form to the Chief of the PDO-RE, Mr. Sjoufjan Awal, for the purpose of review, signature and submission to management of the three RE Cooperatives. These completed Guidelines to be followed by RE Cooperative personnel relate to "Reports and Reporting Procedures" and "Service Line - KWH Meter Entrance Staking Procedures." Preparation of additional guidelines on financial and internal RE Cooperative functions is in process.

Budgeting and cost-accounting --- The NRECA team continued to provide assistance to PDO-RE staff in the analysis of financial budgets which had been prepared by RE Cooperative staff members and submitted to PDO-RE for action. The budget request from the Lampung Cooperative for the remainder of 1981 was given priority in view of the demonstration electrification project (referred to as project REIL) now under construction at that location. Agreement was reached on revisions of budget line-item totals and the revised budget was returned to management of the Lampung Cooperative for comments and action.

A budget for the Luwu RE Cooperative was reviewed and totals adjusted as deemed necessary. Since a project REIL is also planned for this Cooperative

to begin very soon, a PDO-RE staff member hand-carried the revised budget to the Luwu project site to expedite approval.

--- NRECA team members met with PDO-RE officials on several occasions for continuing discussions on retail electric rates that will be applied at the Cooperatives. Of immediate concern is a retail rate for the Lombok Cooperative, now in operation and selling electric energy. The temporary retail rate being applied does not produce sufficient revenue to meet operating expenses. PDO-RE officials requested the NRECA team to produce additional statistics and projections of cost of electric service, upon which retail rate levels can be based. These studies are now in process by NRECA team members.

Meeting participation --- NRECA team members attended a meeting called by Mr. Robert Johnson, USAID-PTE RE Project Manager for the purpose of reviewing the need for improving construction methods and procedures in Lampung project REIL construction. This meeting, also attended by C.T. Main, PDO-RE and Lampung Cooperative personnel, was quite productive as several recommendations were formulated and the A&E firm, C.T. Main, will provide on-site follow-up.

--- Team members participated in meetings held on the subject of project REIL construction at the Luwu Cooperative. It is anticipated that this proposed demonstration project will serve several hundred consumers in the Cooperatives service area by the end of 1981. Major problems relate to material procurement schedules and source of funding; USAID-loan versus GOI Rupiah loan funds. PDO-RE officials would like to complete a segment of this project by July 12, the anniversary date for Cooperative in Indonesia, and NRECA's OMT responsibilities are being related to this time frame.

--- During his visit to Indonesia Mr. Sam Bunker and the NRECA team leader Mr. McNeill met with USAID officials for a review of NRECA's input to the RE program and the USAID/NRECA contract status. Mr. Bunker executed a PIOT prepared by USAID's contract office in the amount of \$140,000 which provides funds for NRECA team services until mid-1981. It is anticipated that a contract amendment will be made by that time to extend the teams' services until March 1983.

--- NRECA team members attended a luncheon hosted by PDO-RE for Mr. Thomas Niblock, USAID Mission Director, who has retired from USAID. This event, which was attended by approximately eighty (80) representatives of GOI, USAID, C.T. Main, Sandwell Inc., PDO-RE and NRECA, provided the opportunity to bid farewell to a staunch promoter and supporter of rural electrification whose presence in Indonesia will be missed.

--- As a part of the NRECA team daily routine, informal meetings were a continuing activity; PDO-RE officials and NRECA staff members; USAID officials and the NRECA leader; co-consultants, C.T. Main and Sandwell Inc., and NRECA team members. Results of such meetings are general in nature and can be found in RE program progress as reported in various sections of this report.

Training --- The NRECA training officer and the NRECA Lampung Cooperative Advisor conducted a two-day training course on Service Drops and KWH Meter Entrance installations. This course, conducted in the field where distribution system construction is in progress, included familiarization with service drop line staking sheets, staking procedures and the construction assembly units to be entered on staking sheets. The twelve (12) participants also receive training on installation methods for service conductors, meter entrance cables and associated equipment.

--- A training course on "construction-cost accounting" began during the last week of this reporting period. This five-day course, held at Metro Lampung for twelve employees of the Cooperatives, included handouts of typical events during the pre-construction and closeout thereof. Accounting requirements for each event were explained in detail and participants performed the various accounting transactions in workshops which were included in the training course schedule.

--- The NRECA training officer continued to prepare training course outlines and topics for future courses including an outline for electricians and linemans training to be conducted at Luwu in May. In addition, an outline was drafted for a proposed management seminar to be conducted at each project site for Board members, audit committee members and managers.

OUTER ISLAND PROJECTS

Lombok-Sinar Rinjani Electric Cooperative

General --- NRECA team member, Paul Swanson, was busily engaged in his responsibilities as advisor to the Lombok Cooperative during all of this reporting period. Backup support was given by the administrative-finance officer for the NRECA team who spent three days at the Cooperative Headquarters. Also, Mr. Sam Bunker, Administrator of NRECA-IPD, visited the project and met with the Board, manager and staff members, local DGC officials and viewed some of the twenty-five (25) installations where electric service is used productively. (Pictures on page 13 of this report.)

--- The NRECA advisor assisted the Cooperative's Manager, Mr. Ridwan, in a review of the bylaws of the Cooperative, comparing contents of the English version and the Indonesian language version. This task was prompted by the misunderstanding that evolved at the annual meeting of members held during the last reporting period. A question remains as to the requirement for an election of directors to be held at an annual meeting in 1981. This is now understudy by Cooperative management and by provincial level DGC officials.

--- Policy formation was another activity of the NRECA advisor during this reporting period. Previously, NRECA advisors had prepared more than fifteen policies that were adopted by the Board of Directors, most of which are presently being followed in the Cooperatives day to day operations. During this period, the advisor drafted five additional policies on financial matters, safe guarding of records and employee fringe benefits. The manager and Board of Directors are now reviewing these proposed policies and it is expected that positive action will be taken at the next regular meeting of the Board of Directors.

--- The manager and NRECA advisor continued their efforts to enforce collection and "disconnection for non-payment" policies. Approximately 90% of the members pay their electric bills on time but greater efforts are required to collect for monthly energy sales from the remainder of the membership. Since electric service and the associated monthly payment obligation is new to residents of this area, time is required to "train" the membership in fiscal responsibilities.

--- Efforts continue to staff the Cooperative's office services department with qualified personnel. During this reporting period, upon recommendation of the NRECA advisor, a change was made in the position of cashier. A search still continues for a qualified accountant who could eventually fill the position of Office Service Department Supervisor.

--- Of great interest to NRECA team members and co-workers in the RE program is a new means of communication now in use at this Cooperative. A radio station has been constructed and is now in operation from 5 P.M. to 10 P.M. daily. This station, with a power of only 125 watts, has proven to be an effective tool for communicating with the membership of the Cooperative and the general public. Broadcast schedules include news about the RE Cooperative, policies and information about the Cooperative's operations, information about the PDO-RE and other governing agencies, local, regional and national news plus the usual welcomed inclusion in radio broadcasts, music. Since less than 50% of the adult population in this area have the ability to read, these radio broadcasts are of great interest to the membership. The NRECA advisor and the Cooperative's Member Services Department staff are striving to prepare broadcast schedules to maximize effectiveness of this communication media.

--- The Cooperative operates a store in which electric appliances are stocked and sold to the members. Emphasis is placed on productive uses equipment. Credit is extended. Terms and conditions of repayment vary according to the amount of the loan and the purchaser's ability to pay. During this reporting period, the NRECA advisor prepared a procedure guideline for inventory control and financial accountability for this enterprise. A reporting system is being developed which will include profit and loss statements and statistical reports to be prepared on a monthly basis.

Visitors --- The Lombok Cooperative continued to receive visitors who wished to view the RE site and gain first-hand information. Among the visitors this period were Mr. Leroy Hollenbeck, Consultant Specialist for Fisheries from Resource Management Inc., for the Lombok PDO projects and Messrs. Doug Tinsler and Carl Dutto of USAID's Rural Development Office. The NRECA advisor provided information to these visitors on the Cooperative's status and plans for the future, and conducted a tour of productive-use installations.

Problems --- One of the main problems of the Cooperative's internal organization relates to the legal status of Board members referred to earlier in this report. The Chief of the Lombok province DGC office, Mr. Eon Mukhtar, has indicated that election will not be conducted until the 1984 annual meeting of members. It will be known next month, when the Cooperative resumes its "recessed" annual meeting, whether or not the membership will accept this decision.

--- Collections for energy sales and housewiring monthly installments remains on the problem list. Assistance has been solicited from local government officials on each village who are now serving as collectors for the Cooperative, with remuneration based on rupiah seventy-five (Rp 75) per bill. The effectiveness of this collection method will soon be known.

--- Quality of staff and employee is still a handicap. It has been difficult to find qualified applicants locally and to train and motivate those who were hired. An office manager and a chief accountant is badly needed. The General Manager, Mr. Ridwan, is recruiting for these positions. On-the-job training is provided at every opportunity by the NRECA advisor. However, performance is still low in general and the general attitude of the employees needs improvement.

Lampung-Sinar Siwomego Rural Electric Cooperative

General --- NRECA team leader, Lloyd Lake, was active in his role as project advisor for the OMT team during all of this reporting period. As construction activities for project REIL gained momentum the daily tasks of the advisor increased in scope.

--- A major activity for the advisor during this reporting period was construction material control and construction-cost accounting. Invoices were received for construction materials procured through the A&E consulting firm, C.T. Main which provided information necessary for material pricing. The advisor and the Cooperative's Stock Record Clerk spent several days preparing Stock Record Cards and entering prices of each of the numerous construction material items.

--- Housewiring program monitoring was a time consuming task for the advisor as the Cooperative's housewiring program continued its momentum. Short-term loans are now being extended for housewiring installations which increases the volume of paper-work involved and the amount of time necessary to properly monitor this important program. The results are satisfactory, however, as more than twelve hundred (1200) houses are now wired and all documents relating to material and labor costs are being processed.

--- Another NRECA team responsibility was accepted during this period as service drop and KWH meter entrance installation began. The project advisor and the training officer from the NRECA team trained personnel from the Cooperative to engineer this construction activity, prepare staking sheets, and to properly install construction materials to form the construction assembly units designed by NRECA team members. At the end of this reporting period almost eight hundred (800) service drops and meter entrances were in place.

As a follow-up to the above-mentioned activity, NRECA team members provided on-the-job training for KWH meter socket and KWH meter installation. This activity is the final step in the construction program, and in addition to instruction on installation techniques, training on administrative aspects, and documentation of consumer-connects, such information -- KWH meter number and reading by location -- is an important consideration.

--- The NRECA advisor devised a KWH meter and transformer numbering system and implemented this activity during this reporting period. Each meter and transformer will be numbered with a cooperative identifications number for control purposes in addition to the manufacture's serial number. This will be a valuable addition to record cards and simplify location of these important construction equipment items.

--- The NRECA advisor assisted the manager of the Cooperative, Mr. Ibrahim, in his efforts to staff the Cooperative with qualified personnel. The advisor task included the preparation of job descriptions and recommendations for reassigning personnel as deemed advisable. Using the newly adopted organization chart as the guideline, employees were placed in respective positions which now total fifty (50).

--- During the construction-cost accounting seminar held at the Cooperative during this period, the NRECA advisor and team training officer assisted the NRECA administrative finance officer in seminar presentations and monitored this activity. Team members were pleased with the degree of comprehension by seminar participants as reflected in scores on examination papers. In general, it can be stated that this Cooperative is blessed with qualified personnel in numerous key positions, an asset that does not exist to-date at the other RE Cooperatives.

Problems --- The PDO-RE appointed manager of the Lampung Cooperative in doing a commendable job and in general, is being accepted by the members of the Board of Directors. One problem remains to be solved however, relating to housewiring collections. The accounting system recommended by NRECA and followed for the most part by all Cooperatives includes a requirement that all housewiring income be deposited in a special bank account. Transfers from this bank account to a second account, referred to as a disbursement account, are to be made at regular intervals by the Board of Directors based on the manager's presentation of estimated disbursement requirements. At this Cooperative the Board of Directors have been reluctant to transfer funds and the manager was forced to withhold part of the collections to provide funds for paying contact electricians. This results in a substantial loss in internal financial control.

In addition, the NRECA recommendation on housewiring loans is not being followed by the Board of Directors. Instead of a recommended interest rate of six (6) percent on the unpaid balance for housewiring installations, the Board of Directors has instructed Cooperative management to charge a rate that is more than double the recommended rate. They also require that the maximum loan period be limited to three months. This serious deviation from recommendations and implementation plan inclusions requires attention of PDO-RE and USAID, the agency that provides initial funding for housewiring materials.

Luwu-Samabotuna Rural Electric Cooperative

General --- An annual meeting of members was held at Bone Bone on April 30th, 1981. Fifty-eight members from five villages were registered and present to hear reports and to participated in the business sessions. This event, which received TV and newspaper coverage, was a highlight in 1981 activities at this Cooperative; being held just prior to the beginning of construction of the demonstration project REIL. The guest list included officials from PDO-RE, DGC and NRECA.

--- Another highlight during this period was the official turn-over of employees and project management from the DGC Coordinator, Mr. Bidullah Hassan to the PDO-RE appointed manager, Mr. Bagio. Board members, the NRECA Team Leader, Peter McNeill, and the NRECA Advisor, John DeFoor were present for this event. The GOI-DGC DIP funds still provides the major source of funds for employees' salaries, however, all employees are now included in the organizational structure of the Cooperative.

--- Planning for training programs was a major activity of the NRECA advisor during this period. With distribution system construction and generation installation for the REIL project scheduled to begin in May 1981. Numerous training activities must be conducted; timed to various stages of system development.

--- Membership solicitation continued and preparations for the housewiring program began. The NRECA advisor documented the requirements for various forms needed for this activity and compared requirements with printed materials already received from the PDO-RE. Action was taken to assure that all printed materials would be available when the housewiring program begins.

--- Construction activities continued at the Cooperative Headquarters site at Minna. One additional residence, to be occupied by the manager of the Cooperative, was completed during this reporting period. At this site, a total of five houses, a temporary office building and a temporary power plant will be located, the cost of which is being paid by DGC-GOI funding.

--- The GOI Type B house constructed last year (1980) for the NRECA advisor is not yet finished in that numerous plumbing leaks have shown up. The house was apparently built with little or no supervision or inspection of the contractor's work and practically all of the plumbing was improperly done. Some of the pipes are imbedded in the floors and walls. Consequently, when a leak develops at the joints the wall and floor must be opened before repairs can be made. The C.T. Main Engineer, Mr. Garcia, and the NRECA Advisor, John DeFoor, have been working together to repair the leaks in both houses and are almost finished. Mr. DeFoor has been occupying a Bina Marga Guest House facility but will be required to move on or before June 1st because another expatriate advisor will need this guest house.

--- Adequate electricity is also a problem in this headquarters compound. The 35 kw excess property generator provided by USAID was not operational when it arrived. Efforts to locate the necessary spare parts have been very difficult and time consuming. Trakindo apparently does not stock all of the necessary parts for generators of this type and size. Two 12.5 kw generators manufactured in India are being used alternately to provide electricity for the compound. However, both of them have failed mechanically and have been out of service for several days at a time until they could be repaired.

--- Several meetings were held between the NRECA advisor, C.T. Main representatives, Board members and Cooperative management during this period. The major subject was project REIL, planning and preparations. In the reporting periods to follow, activities will enter the construction stage and progress to the operating period.

LOMBOK COOPERATIVE



Cooperative employees broadcasting the latest news about the Lombok (Sinar Rinjani) Electric Cooperative from the Cooperative Headquarters, Aikmel, Lombok (dubbed VOA, voice of Aikmel)



NRECA Advisor, Paul Swanson, watches a member use the electric sander which the member purchased from the Cooperative electric appliance store, in wood furniture construction

LAMPUNG COOPERATIVE



The temporary power plant constructed near Metro, Lampung, to serve as the power supply for project REIL, a demonstration rural electrification project (USAID-furnish gen-sets)

LUWU COOPERATIVE



The latest construction activity at the Cooperative Headquarters site, a home being built for the manager (near the homes already constructed for consultants of NRECA and C.T. Main)

PERSON-MONTHS BY POSITION, NRECA CONSULTANT TEAM

POSITION	PRESENTLY FILLED BY	CONTRACT PERSON-MONTHS	EXPENDED THIS PERIOD	EXPENDED THROUGH APRIL	PERCENT OF CONTRACT
Team Leader	Peter McNeill	36	1	31	86
Training Officer	Louie Sansing	36	1	27	75
Administrative Officer	Ray Shoff	19	1	18	95
PLN Advisor	Sam Adkins	42	1	26	62
Lampung Advisor	Lloyd Lake	44	1	31	70
Lombok Advisor	Paul Swanson	44	1	27	61
Luwu Advisor	John DeFoor	44	1	26	59
Short-term Advisors		27	0	18	67
Consultants		31	0	0	0
		323	7	204	63

Summary of Expenditures

National Rural Electrification Cooperative Association
 1800 Massachusetts Ave., N.W.
 Washington, D.C. 20036

AID/ASIA - C 1347
 Date: March 1981
 Period of contract: 8/25/78 - 8/25/82

	Budget	Total Expense To Date	Prior Billings	Current Billings
Salaries - Field	\$ 874,520	576,487.86	554,283.88	22,203.98
Salaries - Home	140,050	98,720.49	95,689.18	3,031.31
Fringe Benefits	256,664	217,147.18	208,834.19	8,312.99
Consultant Fees	95,800	33,906.625	33,906.25	
Allowances	366,145	219,851.94	215,294.34	4,557.60
Travel and Transportation	310,000	206,094.91	196,736.19	9,358.72
Other Direct Costs	125,900	69,886.08	67,727.47	2,158.61
Overhead	225,360	154,486.97	148,682.85	5,804.12
Equipment and Materials	15,000	15,705.27	15,705.27	-
TOTAL	\$ 2,410,000	1,592,286.95	1,536,859.62	55,427.33

PDO - RE OUTER ISLANDS

COOPERATIVE TRAINING COURSE SCHEDULE

NRECA NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

NO.	TITLE	TARGET DATE IMPLEMENTATION PLAN	COURSE DURATION	1979				1980				1981				1982			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
				200	COOPERATIVE MANAGEMENT	MAY 1979	30 hrs.												
205	RMS TRAINING	JUNE 1979	30 hrs.	19	12	9	12	18	14	12	11								
206	ACCOUNTING - REPORTING	JUNE 1979	40 hrs.																
210	STAFF ORIENTATION	AUGUST 1979	20 hrs.																
220	TRAINERS TRAINING (CONSTRUCTION)	OCT/NOV 1979	200 hrs.																
230	TRAINERS TRAINING (HOUSEWIRING)	NOV/DEC 1979	40 hrs.																
240	LINEMAN'S TRAINING	JAN/FEB 1980	200 hrs.																
250	ELECTRICIAN TRAINING	JAN/FEB 1980	40 hrs.																
260	PRODUCTIVE USE SPECIALIST	MARCH 1980	60 hrs.																
300	MATERIAL LOGISTICS	JANUARY 1980	40 hrs.																
310	ACCOUNTING - REPORTING	FEBRUARY 1980	40 hrs.																
320	ELECTRICAL APPARATUS	MARCH 1980	80 hrs.																
330	ENGINEERING	MAR/APR 1980	40 hrs.																
340	METER READING	JULY 1980	40 hrs.																
350	OPERATIONS MAINTENANCE	SEPTEMBER 1980	60 hrs.																
360	ACCOUNTING - REPORTING	NOVEMBER 1980	40 hrs.																
370	WORK ORDER CONTROL	JANUARY 1981	40 hrs.																
380	SUPERVISORY SKILL	FEBRUARY 1981	15 hrs.																
390	SAFETY TRAINING	MARCH 1981	15 hrs.																
400	INFORMATION SEMINAR	MARCH 1981	16 hrs.																
410	LINE MAINTENANCE	APRIL 1981	16 hrs.																
320*	REPEAT COURSE																		
330*	REPEAT COURSE																		
380*	REPEAT COURSE																		
390*	REPEAT COURSE																		

*Repeat courses as needed

**Course added

Courses completed and number of people trained ○

Course scheduled □

RURAL ELECTRIFICATION COOPERATIVE PROJECT SITES

