

< 資料 7 >

对 処 方 針

タイ国地方配電自動化技術者養成協力事業
事前調査対処方針

91.7.

	タイ側要請内容等	日本側対処方針・調査事項等
1. プロジェクトの名称	Training in Distribution Automation System Project in Thailand	「タイ国地方配電自動化技術者養成協力事業」 Japanese Technical Cooperation Project on Training in Distribution Automation System in Thailand
2. 実施機関	要請主体：内務省 監督機関：科学技術エネルギー省 国家エネルギー庁（NEA） 実施機関：地方電力公社（PEA）	内務省・NEAとしてどこまでサポートするのか、他の機関との関係はどうか ・発電公社（EGAT） ・都市圏電力公社（MEA）
3. プロジェクトの目的	自動配電システムを地方配電に適用し、電力の質的安定供給を計るために必要な人材の養成。（PEA本店のEngineer・Technician 250名、支店のEngineer・Technician 300名、営業所のTechnician 800名 合計1350名を対象にする。）	C/Pに対するTrainer's Trainingをプロジェクトの主目的とする。 第7次国家経済社会開発計画（1992～1996）の中での位置付けの確認 技術移転の成果がいかなる組織、資金手当（海外ローンによるのか自国資金によるのか）により、いかに国家開発計画に活用されるのか。 アウトプットの設定 a. 配電自動化技術者の養成 b. テキストの作成 c. C/Pによるセミナーの運営
4. 協力分野		①配電管理業務機械化 ②通信技術 ③配電ネットワーク保守・工事 上記分野における研究開発・研修にかかる技術指導・助言
5. 協力期間	5年間	4年間
6. タイ側実施体制		
(1) 施設 (プロジェクト外)	PEA研修センター（アユタヤ県、バンコクから北東約45KM）及びランシット配電指令センター（バトムナム県、バンコクから北約40KM）	ランシット配電指令センターに設置する機材レイアウトおよびセンター修復時期と技術協力との調整 ・センターの収容人数（宿舎の有無） ・センター修復の必要性の確認 ・レイアウト図面作成への助言 ・電気・水道等インフラの確認
(2) 組織・人員	PEAプロジェクトチームを編成、以下の5部・事業所を統括する。	組織図、C/P氏名の確認 専門家チームの位置付け

	<ul style="list-style-type: none"> ①開発部 ②計画部 ③エンジニアリング部 ④メンテナンス部 ⑤人事部 ⑥PEA支店・関連事業所 <p>人員：プロジェクトマネージャー 1名 エンジニア 10名 テクニシャン 10名</p>	<ul style="list-style-type: none"> ・PEA総裁と対等？（PEA全体の中でのプロジェクトマネージャーの地位・責任体制を明確にする。） 運営管理面での指導・助言も行う（21名ではたして十分な人員なのか？事務要員は何名か？）
(3) 予算	特に言及していない	<p>具体的な予算計画の確認 特にランニングコスト センター修復が必要ならば予算確保要求</p>
(4) その他		<ul style="list-style-type: none"> ・専門家を補助するスタッフの配置 ・専門家のための事務所・設備の提供
7. 日本側協力計画		
(1) 専門家派遣	<p>長期専門家</p> <ul style="list-style-type: none"> ①配電業務機械化 2名 ②通信 1名 ③配電ネットワーク保守・工事 1名 <p>短期専門家 数名</p> <p>合計5年間で216m/m</p>	<p>長期専門家 4名/年</p> <ul style="list-style-type: none"> ①チーフアドバイザー 1名 ②配電業務機械化 1名 ③通信 1名 ④調整員 1名 <p>短期専門家 数名/年 （配電ネットワーク保守・工事等）</p>
(2) 研修員受入れ	年間数名	2～3名/年 <ul style="list-style-type: none"> ・配電自動化・通信・ネットワーク保守工事
(3) 機材供与	<p>約3億円 （配電制御シミュレーション装置）</p>	<p>約3億円以内 <ul style="list-style-type: none"> ・初年度2億 ・供与順序の検討（分割して供与可能か否か） </p>
8. その他		
(1) 産業の現状		電力事情の調査
(1) 日本人専門家受入れ体制		<p>生活環境を調査 住宅・医療・食料・教育</p>
(2) 協力体制		JOINT COMMITTEE 設立の必要性

<p>(3) プロジェクト 終了後の展望</p>		<p>養成した技術者をどのように活用していくのか 全支店・関連事業所への普及の具体的方策の確認</p>
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< 資料 8 >

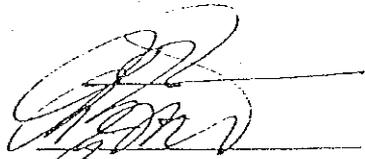
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MINUTES OF MEETINGS
ON THAILAND-JAPAN TECHNICAL COOPERATION PROJECT
ON TRAINING IN DISTRIBUTION AUTOMATION SYSTEM

The Japanese Preliminary Survey Team (hereinafter referred to as "the Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Moriya MIYAMOTO, Technical Special Assistant to the President, JICA, visited Thailand from July 8 to 19, 1991 for the purpose of clarifying the outline and background of the Thai proposal as well as studying the feasibility on Thailand-Japan Technical Cooperation Project on Training in Distribution Automation System (hereinafter referred to as "the Project").

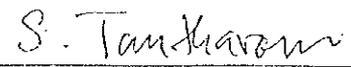
During the stay in Thailand, the Team exchanged views and had a series of discussions with the officials of Provincial Electricity Authority (hereinafter referred to as "PEA") and also made field surveys to the proposed project site and the relevant facilities. As a result of the discussions, both parties came to the understanding concerning the matters referred to in the document attached herewith.

Bangkok, July 18, 1991



Mr. Moriya MIYAMOTO
Leader

Preliminary Survey Team
Japan International
Cooperation Agency



Mr. Sunthorn TANTHAVORN
Deputy Governor
Provincial Electricity
Authority

ATTACHED DOCUMENT

1. Background of the Project:

Recently in Thailand, there have been increases in social requirements for improved reliability in electricity supply as well as increases in the supply capability in accordance with the rapid increase in electricity demands. In this concern, PEA plans to implement the Distribution System Dispatching Centres Project First Stage under the 7th National Economic and Social Development Plan (1992-1996). To realize the plan, training of the engineers and technicians is urgently required to enable the introduction of Distribution Automation System.

2. Name of the Project:

"Thailand-Japan Technical Cooperation Project on Training in Distribution Automation System".

3. Objective of the Project:

Objective of the Project is to transfer necessary knowledge and technology in the field of Distribution Automation System to Thai Counterpart Personnel so as to enable PEA staff to develop a most suitable system to meet the specific requirements of PEA.

4. Implementation Agency of the Project:

Provincial Electricity Authority, Thailand
The Organization Chart of PEA is shown in Annex-I

5. Duration of the Project:

The duration of the project shall be 4 to 5 years starting from the date of signing of the Record of Discussions tentatively in the Japanese fiscal year 1992.


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6 Location of the Project:

The proposed sites of the Project shall be at:

- (1) PEA Training Centre in the head office.
- (2) PEA Training Centre in Nakhon Chaisri, Nakhon Pathom Province.
- (3) Rangsit Electric Office.

7. Measures to be taken by the Thai side:

The following measures shall be taken at the expense of the Thai side for the smooth implementation of the Project;

- (1) To provide the following 21 Counterpart Personnel:

Project manager: 1 person (The Deputy Governor of PEA
in charge of planning and
development)

Engineers and Technicians: 20 full time persons

- (2) To provide necessary administrative staff and secretaries.
- (3) To provide necessary land, buildings and facilities, and to renovate the buildings and facilities as necessity arises.
- (4) To provide necessary equipment and office supporting facilities other than those provided by Japan.
- (5) To bear the following expenses:
 - 1) Expenses necessary for domestic transportation of machinery and equipment provided by Japan as well as for their installation, operation and maintenance.
 - 2) Expenses necessary for local construction and installation of equipment as well as their operation and maintenance.
 - 3) All local expenses for PEA trainees including training materials to be conducted in Thailand.
- (6) PEA will try to provide travel allowance for Japanese Experts for official travel outside Bangkok in



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accordance with the regulations of Department of Technical and Economic Cooperation.

8. Technical Cooperation by the Japanese side:

(1) Dispatch of Japanese Experts

1) Long Term Experts:

- a) Team Leader 1 person
- b) Coordinator 1 person
- c) Experts on Distribution Automation System 2 persons

2) Short Term Experts

Short Term Experts shall be dispatched if necessity arises.

(2) Training of Counterpart Personnel in Japan

It is requested that more than 3 Counterpart Personnel shall be trained in Japan annually during the period of the Project.

(3) Provision of Equipment

Necessary equipment shall be provided within the budgetary limit of the Japanese government.

9. Scope of the Technical Cooperation:

Japanese side will transfer necessary knowledge and technology theoretically and practically to the Counterpart Personnel in the following fields of Distribution Automation System (DAS).

- (1) Planning
- (2) System Design
- (3) Dispatching System
- (4) Communication System
- (5) Maintenance and Repair of Equipment



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10. Joint Committee:

Both sides agree that the Joint Committee should be established for the successful implementation of the Project.

11. Participants in the Meetings:

The list of participants in the meetings is shown in Annex-II



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BOARD OF DIRECTORS

GOVERNOR
DR. PIRA PITRACHAI
Tel. 5100

OFFICE OF THE INSPECTORS

INSPECTOR FOR REGION 1
Mr. Nati Pochanakon
Tel. 5131

INSPECTOR FOR REGION 2
Mr. Naris Krinchai
Tel. 5132

INSPECTOR FOR REGION 3
Mr. Vuthiana Satrapan
Tel. 5133

INSPECTOR FOR REGION 4
Mr. Siri Ensonbat
Tel. 5134

INSPECTOR FOR INDUSTRY
Mr. Songtran Pibalchon
Tel. 5130

Inspectors
Mr. Saroan Sonchit Tel. 5136, Mr. Pravit Tevijadudha Tel. 5135
Mr. Utai Prongsigorn Tel. 5137, Mr. Serasak Techapanit Tel. 5138

ASSISTANT GOVERNOR

PLANNING AND DEVELOPMENT
Tel. 5126

TECHNIQUE
Sub. Lt. Suanth Chavanasapreecha
Tel. 5121

OPERATIONS
Dr. Chulapongs Chullakesa
Tel. 5116

AUDITING OFFICE
Mr. Virul Porakul
Tel. 5000

Foreign Experts
German Tel. 5140
Japanese Tel. 5141

OFFICE OF THE GOVERNOR
Mr. Shaibol Panja
Tel. 5150

Auditing Service Div. Region 1
Mr. Suteap Lahirungs
Tel. 5010

Auditing Service Div. Region 2
Mr. Seri Inapitana
Tel. 5020

Auditing Service Div. Region 3
Mr. Tai Loohavit
Tel. 5030

Auditing Service Div. Region 4
Mr. Prasit Anantayakul
Tel. 5040

Auditing Service Div. (Head office)
Mr. Cherd Sutiyaikul Na Ayudhya
Tel. 5050

Planning and Evaluation Div.
Ms. Bhanor Suranasathira
Tel. 5060

Audit Administration Div.
Mr. Pipop Sirirungs
Tel. 5070

General Services Div.
Mr. Anuj Dhanasobhon
Tel. 5160

Administrative Div.
Mr. Soakid Pluckpankachi
Tel. 5170

Investigation Service Div.
Mr. Soprasong Ekjitt
Tel. 5180

Conference Service Div.
Mrs. Peerat Jotil
Tel. 5190

DEPUTY GOVERNOR (PLANNING AND DEVELOPMENT)
Mr. Sunthorn Tantavorn
Tel. 5125

DEPUTY GOVERNOR (TECHNIQUE)
Mr. Surasudi Senavongse
Tel. 5120

DEPUTY GOVERNOR (OPERATIONS)
Lt. Col. Iroon Kaerontai
Tel. 5115

DEPUTY GOVERNOR (ECONOMICS AND FINANCE)
Mr. Pravit Vetcho
Tel. 5110

DEPUTY GOVERNOR (CORPORATE SERVICES)
Mr. Savad Puipanthavon
Tel. 5105

PLANNING DEPT.
Mr. Phao Chintua
Tel. 5700

DEVELOPMENT DEPT.
Mr. Phlart Jaranya-yothia
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OFFICE OF THE RURAL ELECTRIFICATION
Mr. Vibulya Kularun
Tel. 5800

ENGINEERING DEPT.
Mr. Chotharat Leera-dhandh
Tel. 5550

SERVICE DEPARTMENT
Mr. Chalor Adhidai
Tel. 5600

CIVIL ENGINEERING AND ARCHITECTURE DEPT.
Mr. Subhap Wilras
Tel. 5650

ELECTRIC ADMINISTRATION REGION 1
Mr. Vitaya Chalernchokchai
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MAINTENANCE DEPARTMENT
Mr. Pracha Thitathai
Tel. 5420

CONSTRUCTION DEPT.
Sub. Lt. Archin Jotisa-likorn P.P.N.
Tel. 5300

ECONOMICS AND BUDGET DEPARTMENT
Sub. Lt. Iroon Vongsakul
Tel. 5350

ACCOUNTING AND FINANCE DEPARTMENT
Mr. Kriengsak Kantarungs
Tel. 5400

PERSONNEL DEPARTMENT
Mr. Vinai Janilorn
Tel. 5200

ADMINISTRATION DEPARTMENT
Mr. Fidal Charupa
Tel. 5750

Project and Planning Div.
Mr. Pracherd Sook-kaer
Tel. 5710

System Development Div.
Mr. Chatchai Chandarasangsang
Tel. 5760

Project Engineering Coordination Div.
Mr. Krit Ketanasaka
Tel. 5810

Electrical and Mechanical Engineering Div.
Mr. Surin Loohaprasit
Tel. 5560

Customer Service Div.
Mr. Apisakdi Loorakul
Tel. 5610

Civil Engineering and Architecture Div.
Mr. Prasert Kengkala
Tel. 5660

ELECTRIC ADMINISTRATION REGION 2
Mr. Kovit Kachatanatee
Tel. 043-241969

Distribution System Control Div.
Mr. Sa-nguan Tuangdaja
Tel. 5460

Project Construction Div.
Mr. Direk Santiphong
Tel. 5510

Power Economics Div.
Mr. Sathon Kongkhaeo
Tel. 5390

Accounting Div.
Mrs. Kachonchit Chavanasapreecha
Tel. 5410

Personnel Div.
Mr. Suthin Laokul-dilok
Tel. 5210

General Affairs Div.
Mr. Choonpol Au-praiwan
Tel. 5760

System Design Div.
Mr. Boonved Charoenchai
Tel. 5720

Analysis and Evaluation Div.
Mr. Viroch Charuvan
Tel. 5770

Project Construction Coordination Div.
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Tel. 5820

Research Div.
Mr. Tanol Permpipat
Tel. 5570

Switchgear and Transformer Div.
Mr. Varee Sasanas
Tel. 5670

Pole and Cross-arm Div.
Mr. Konachai Phannaphan
Tel. 5670

ELECTRIC ADMINISTRATION REGION 3
Mr. Narong Inungrai
Tel. 5143

Distribution Dispatching Centre
Mr. Srachai Srirath
Tel. 5480

General Construction Div.
Mr. Preecha Jarasdaarong
Tel. 5520

Budget Div.
Mr. Atta Sakachon
Tel. 5370

Finance Div.
Mrs. Dharinee Krisnase-ranee
Tel. 5420

Welfare Div.
Mr. Santi Bangye-thao
Tel. 5720

Legal Div.
Mr. Panorath Pan-nitbutr
Tel. 5770

Strategic Plans Div.
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Project Logistics and Monitoring Div.
Mr. Nioachai Tuttonart
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Tel. 5820

Research Div.
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Tel. 5570

Meter Div.
K. L. Chatthan Kasensant
Tel. 5630

Pole and Cross-arm Div.
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ELECTRIC ADMINISTRATION REGION 4
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General Construction Div.
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Budget Div.
Mr. Atta Sakachon
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Tel. 5420

Welfare Div.
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Legal Div.
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Tel. 5770

Project Service Support Div.
Mr. Junphol Pintusarn
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Project Logistics and Monitoring Div.
Mr. Nioachai Tuttonart
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Project Construction Coordination Div.
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Dr. Chaiwachada Chittrakul
Tel. 5230

Training Centre
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Tel. 5240

Electric Vocational School
Mr. Soachai Chaiyanurongse
Tel. 5205

List of Participants in the Meetings

Japanese Preliminary Survey Team

1. Mr. Moriya MIYAMOTO
Technical Special Assistant to the President
JICA
Team Leader

 2. Mr. Munekazu URANO
Senior Inspector for Electric Technology
Public Utilities Department
MITI
Team Member

 3. Mr. Takeshi HIROWATARI
Engineer, Distribution Engineering Division
KEPCO
Team Member

 4. Mr. Tetsuhiro IKE
Mining and Industrial Development Cooperation
Department
JICA
Team Member
-

11. Mr. Manee Panchinda
Deputy Manager, Electrical & Mechanical
Engineering Division
12. Mr. Phasook Longsomboon
Assistant Manager, System Development Division
13. Mr. Chalermchai Sounsomchitr
Assistant Manager, Distribution System Control
Division
14. Mr. Chumpol Srikachorn
Assistant Manager, Project and Planning Division
15. Mr. Apirux Luangthuvapraneet
8th Grade Engineer, Distribution Dispatching Centre
16. Mr. Tawee Laoitichote
Chief of Electronics and Automatic Control Section
Electrical & Mechanical Engineering Division
17. Mr. Chusak Anusaksathien
Chief of Instrument and Text Books Section
Training Centre
18. Mr. Niwat Chayakul
Chief of Electrical System Development Section
System Development Division

19. Mr. Suwat Chiochanchai
Chief of System Analysis and Planning Section
Distribution Dispatching Centre
 20. Mr. Numchai Lowattanatakul
Chief of Mapping Section
Distribution System Control Division
 21. Mr. Varachart Phonoueyporn
Chief of Switchgear and Relay Section
Switchgear and Transformer Division
 22. Mr. Jurailuk Chotiwana
Assistant Chief of Instrument and Text Books Section
Training Centre
 23. Mr. Vilas Ngamsangroongsaroj
Assistant Chief of System Analysis Section
Research Division
 24. Mr. Taweechoke Bejrakashem
Assistant Chief of Switchgear and Relay Section
Switchgear and Transformer Division
-

List of Participants in the Meetings

PEA

1. Mr. Sunthorn Tanthavorn
Deputy Governor (Planning and Development)
2. Mr. Thanu Chinkruea
Director, Planning Department
3. Mr. Phlavut Javanayothin
Director, Development Department
4. Mr. Pracherd Sook-kaew
Manager, Project and Planning Division
5. Mr. Boonwed Charoenchai
Manager, System Design Division
6. Mr. Chakchai Chandarasupsang
Manager, System Development Division
7. Mr. Suvin Laohaprasit
Manager, Electrical and Mechanical Engineering
Division
8. Mr. Kamol Permpipat
Manager, Research Division
9. Mr. Somchai Srirath
Manager, Distribution Dispatching Center
10. Mr. Phakdi Sijaseth
Manager, Training Centre

List of participant in the Meetings

Japanese Expert to PEA

1. Mr. Shingo NISHINO

JICA