Declassified E.O. 12356 Section 3.3/NND No. 785019

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ELECTRICITY, NORTH ITALY
NOV. 1944 – JUNE 1945

15

197

197/PWU ELECTRICITY NORTH ITALY Volume 1

OPENED: 10 Nov 44

CLOSED

12 June 1945

Declassified E.O. 12356 Section 3.3/NND No. 785019

CLOSED

12 June 1945

10000 /150 / 474 514

THIS FOLDER
CONTAINS PAPERS
FROM Nov 44
TO June 45
CATALOGUE-

Declassified E.O. 12356 Section 3.3/NND No. 785019

Riservato Personale

# MINISTERO DELLE CORPORAZIONI

UFFICIO STUDI E RICERCHE

# BOLLETTINO SETTIMANALE
# DEI PREZZI E DEI CAMBI

5737

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# BOLLETTINO SETTIMANALE
# DEI PREZZI E DEI CAMBI

5731

*Roma,* _____

G. SACCONE - ROMA

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Declassified E.O. 12356 Section 3.3/NND No. 785019

VSR/bb

R. 62

Tel.Extn. 317

HEADQUARTERS ALLIED COMMISSION

INTER OFFICE MEMO

12 June 45

REFERENCE: 197/PWU
SUBJECT : Permit to travel to Switzerland.
TO : Economic Section.
FROM : P. Wks. & U. Sub-Commission.

1. Reference is made to the attached correspondence received from Lombardia Region, concerning the request of the Societa' Edison for their Director Dr. Ing. Romagnoli Mosca to travel to Switzerland to transact business.

2. This Sub-Commission has not arranged for the necessary screening of Dr. Eng. Romagnoli Mosca but we are satisfied that it is in the interest of industrial rehabilitation in Northern Italy that he travel to Switzerland.

3. May the travel permit be issued, please.

W. M. LAPPER,
Lieut-Colonel,
Chief Elec. Div.

enclosure

Copy of enclosure in our file with letter from Lombardia, original enclosure to Economic Section

Rule

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Declassified E.O. 12356 Section 3.3/NND No. 785019

R 61

Tel. 469081 Ext. 317

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HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

12 June 45

197/PWU

Subject: Travel permission for Ing. Guglielmo Castelli and Ing. Giuseppe Romagnoli to Switzerland.

To : Regional Commissioner, Lombardia Region
(Attention: Regional Engineer.)

1. Acknowledgment is made of your two letters transmitting requests for the travel to Switzerland of Ing. Guglielmo Castelli and Ing. Giuseppe Romagnoli.

2. These requests have been referred to the Economic Section, this Headquarters, and you will be informed of subsequent developments.

W. M. LAPPER,
Lieut-Colonel,
Chief Elec. Div.

0445

Declassified E.O. 12356 Section 3.3/NND No. 785019

COPY

ALLIED COMMISSION
TH. S. C. (RAILS) C. R. BRANCH N. W. ITALY
c/o H.L.C. 57 AREA
c/o H.L.C. 151 SUB AREA
C.M.F.

ITALIAN STATE RAILWAYS
GENOVA-VIA ANDREA DORIA
TORINO-STAZIONE PORTA NUOVA

TORINO 5th June 1945

PRIVATE AND CONFIDENTIAL.

TO: Director, Th. S.C. H.Q. Allied Commission, Rome.

SUBJECT: Preliminary Report on Electrical Situation Torino and Genova Compartimento's, I.S.R.

1. Attached are reports and memo's concerning the electric power and installations in connection with the State Railways in N.W.Italy.

2. Torino Compartimento: (Appx"A"). It will be noted that the electrical position generally is favourable and that sufficient power is available for the present and immediate future needs. Repairs are going ahead subject to the availability of materials and the electrification of newly opened sections should not present any difficulties in this compartimento.

3. Genova Compartimento: (Appx"B"). The position in this compartimento is not too good, the causes are defined in appx "C" and the general results shown in appx "B". As a temporary measure I am making arrangements for a "feeder" line from Torino sub-stations as a booster.

4. Appendix "C": These are translated copies of correspondence between Ing Balsamo, Director of C.I.E.L.I., officers of A.M.G. and his agents, plus a copy of each order issued by the French Divisional Commander. They will serve to present a general picture of conditions in the frontier zones, especially as it affects the State Railways.
My latest information is that conditions are even worse now.

(s) L.H.CONWAY
Capt.R.Signals
Th.S.C. ( Rails) C.R. Branch
Allied Commission, N.W.Italy

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C O P Y of Translated Copy

Ch1.Dd.

Genoa May 11 1945

To Capt. U.N.S. J A C K S O N

of the 10 U.K.N. in

GENOA

We have the honour of informing you that the following phonogram was sent from Genoa, on May 7th 1945, at 3 P.M.:

"To Ing.Bosio- S.Dalmazzo cy Tenda
"Before supplying Fontan and Briel systems with the power produced by the "electric stations in S.Dalmazzo di Tenda, the conditions of supply have to "be settled as well as we must know when to head our invoice to, S.Dalmazzo "di Tenda stations belongs, in fact, to the "Impress Elettriche Liguri" "Company and therefore the occupant must pay for the output after the "military occupation rules.

The Consigliere Delegate
Sad Ing.Balsamo

This phonogram was immediately brought to the Major Commanding the French Troops in Tenda Region by our Ing.Bosio.

On May 8th about 4 p.m. two French officers took away from S. Dalmazzo our local manager ING.Alessandro Bosio without even allowing him to go home and inform his family.

Only the day after the local Major Commander of the French Troops told Mrs.B Mrs.Bosio that her husband had been taken to Nizza to give explanations to the general Commander of the Division.

On May 9th, an engineer M.Jean Mondodeu, presented himself at our S.Dalmazzo station, saying that he had been ~~xx~~ charged by the French Military Authority to take over the direction of our three stations of S.Dalmazzo, the Frontier and Le Mesce. Besides he had to provide for the power transportation from S.Dalmazzo to Fontan and Briel, in order to supply as soon as possible Menton and the French Riviera with power. As to start, about 2,000 KW are foreseen-This amount can soon rise to 5,000 KW

The said French engineer to whom our staff asked to define the supply conditions replied that the question did not belong to ~~him~~ to his competence.

The said French engineer the ordered all our available workmen to be sent to repair the line S.Dalmazzo-Fontan-Breil.

That is to say we are compelled to interupt the reparation works on S.Dalmazzo-Cairo line, the only one which is at present possible to bring power, with, from the three stations of High Valle Roia to Genoa and Liguria. Owing to this interruption the Cieli Company cannot assure the perfect regularity of the service.

Yours Respectfully

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(s) Sad Ing.Balsamo

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C O P Y Translated Copy

Genoa, May 16th 1945

MEMORANDUM

S.Dalmasso di Tenda electric station has an efficient continued power of 35,000 KW- KW 24,000 can be produced with 50 periods for civil and industrial use and KW 11,000 with 16 periods exclusively for railway service.

The station of the Frontier had an efficient power of KW 8,500-50 periods.After the damage caused by road mines explosion,its power is now reduced to KW 4,500 about.

Le Mesce station has an efficient power of KW 2,000.

On the whole the three stations belonging to the Cieli (Compagnia Impresse Elettriche Liguri) of Tenda district can give,even now a continued efficient power of KW 30,000 for civil and industrial purposes services and KW 11,000 for railway traction.In the actual spring period of melting the power could rise to 600,000 KWH daily-50 periods- and 150,000 KWH-16 periods.

During the next summer period of low water,a daily total of KWH 200,000 -50 periods can be reached by the partial use of the water gathered in artificial tanks..This amount will undoubtedly be necessary to assure the regularity of all the services of Genoa and Liguria during the period from July to September.

The stations of Tenda district ceased their power production to the Ligure system on April 17 about 6 p.m. because the electric line from S.Dalmazzo to Cairo had been damaged by gunfiring.

After April 27th while the Germans were already retreating beyond the Colle di Tenda,the French troops entered the Italian land,in Tenda and Briga Marittima districts.Two days later,some motor-lorries arrived in the said districts,with groups of civil people on,probably belonging to Nizza Committees.

These groups of French civil invited the inhabitants to change the Italian ration cards with French ones.

This last operation was joined to the signatures of cards eulogising the annexion to France of these Italian districts.

Then a bill was posted up:the inhabitants were informed that from May 3rd the circulation of Italian money would be forbidden and have to be changed with French money,that is to say 50 for 100-

On May 4th Ing. Tibbau of the "Energie Industrielle" Company presented himself to our Ing. Alessandro Bozio the local manager asking him to provide for sending to Menton and the French Riviera the power produced at S. Dalmazzo.

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As to found his request, the said French engineer handed to Ing. Bosia of the "Cieli" a Requisition Bill signed by the General Commander of the 1st Division of the Free French Forces (see the document annexed).

On May 8th about 4pm. the said Ing. Alessandro Bosia of the "Cieli", was suddenly stopped by some French officers and taken away from S. Dalmazzo di Tenda leaving no time to inform directly his office in Genoa.

The day after the French Military Authorities informed Ing. Bosia's family that he had been taken to Nizza at the Hotel Suisse in order to give explanations to the General Commander of the Division.

On May 9th a Mr. Jean Mondadou, and engineer, presented himself at S. Dalmazzo di Tenda Station (CIELI) he said that, by order of the French Military Authority he had to take the direction of the three stations of S. Dalmazzo, the Frontier, and Le Marco above all in order to supply as soon as possible Menton region with electric power.

The said French engineer, in fact, interrupted the reparation works of the CIELI line from S. Dalmazzo towards Caire, which supplied Genoa and Liguria with power. All the staff working there would have been set to repair S. Dalmazzo-Breil line, the point from which the lines to Menton start.

On May 12th about 11am. the chief of the S. Dalmazzo station had hardly time to inform his office of Genoa, when some french soldiers were providing for the interruption of the telephone line of the service. Since then, the "CIELI" has not any news about its plants in Valle Roja.

The prohibition of using the telephone line to S. Dalmazzo as well as that of repairing the electric line which brings power from S. Dalmazzo to Genoa, through Caire, means that the damages on the lines carrying power through from Val Maira and Val Varaita stations hinder the regular electric service in Genoa and Liguria.

Infact, S. Dalmazzo station, being supplied by a big hydroelectric tank, is one of the few that can reach their highest power in a short time.

As to the power of the three stations of High Valle Roja, it is rather uneasy the extent what damage their lack can cause in the CIELI service.

In fact, owing to the actual decrease of power use in great industries, during the whole period of high water, that is to day until the end of June, the service is supposed to proceed without inconvenience.

But to are sure that the CIELI cannot, with its own means of production, assure the power supply during the summer low water time, that is to say from July to September would the efficiency of its High Valle Roja stations lack.

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The French Military Authorities,since the first moment of their occupation in Tenda and Briga Marittima regions,had rigorously forbidden any transit to Limone and therfore,towards Cuneo too.

This fact,besides the interruption of the telephone private telephone line effected by the French,has completely isolated the plants of High Valle Roja from the rest of the OMELI system,so that the company is completely lacking of any news about their condition,technical as well as administrative. As an example,the OMELI,who paid all the due salary till the end of April to the staff of these plants,is now lacking of any information to establish the accounts for May and,anyhow,could not know how to behave about the money enclosings.

According to the latest news indirectly arrived,Ing.Bosia,of the Olelli after more than twenty prison days in Nizza,had not yet been inquired or by anyway informed about the reasons for his arrest.

On May 25 th 1945 Ing.Nendaccu brought to S.Dalmazzo a certain number of "Feuilles d'embauchage et de renseignements" headed with "Societe Energie Industrielle - Reseau du Var et des Alpes Maritimes-Direction Regional de Menton")

The said French Engineer asked the OMELI'S book keeper to fill the form and then to get it signed by all the staff.Till now,only a small part of the OMELI'S staff is supposed to have signed the work form,for the most part of them intend not to leave their old Italian Company.

(S)L.H.CONWAY

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C O P Y Translate Copy

FREE FRENCH FORCES

1st Division

EXECUTION ORDER

I ) S.Dalmazzo di Tenda electric station shall supply with high tension electric power:

1) The Factory of Fontan belonging to the Company Energie Electrique du Littoral Mediterranean (E.E.L.M.)for the supply of Fontan and Saorge districts;

2) The company "Energie Industrielle" of Briel,for the general supply of & its high tension system.

II - S.Dalmazzo di Tenda electric station shall take all arrangements in order to repair as soon as possible:

1)A H.T. line from S.Dalmazzo to Fontan
2) A H.T.line from S.Dalmazzo to Breil

III - The modifications that may have to be performed in S.Dalmazzo station electric plants for the supply (35 KV) of "L'Energie Industrielle" shall be done by S.Dalmazzo staff.

IV - "L'Energie Industrielle" system shall be connected to Breil, by this company,with S. Dalmazzo-Breil line subject of the above II/2 paragraph.

P.C. 2/5/ 1945

F.to General Garbay

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S.Dalmazzo Tenda station belongs to the Italian Company"CHE.I" whose residence is Genoa (Viale Brigata Biasgno).This station is in the Italian district of Tenda-Cuneo Province.

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HEADQUARTERS-EMILIA REGION
ALLIED MILITARY GOVERNMENT
APO 394
Public Works and Utilities

22 May 1945

Reference: RIX/PU/02.6

Subject : Request for shop truck

To : Electrical Section
Public Works and Utilities Sub-Commission
Allied Commission

1. Request that one shop truck suitable for acetylene and electric welding be made available to Società Elettrica Romagnola, Ravenna. It is suggested that a truck such as used by U.S. Army Engineers, the Truck,shop,motorized,2 1/2 ton.,or its equivalent, would be most suitable for the type work this company must undertake.

2. The Società Elettrica Romagnola, an operating Company of the Società Elettrica Adriatica, operates in the provinces of Ravenna and Forlì and is one of the most heavily-damaged electrical companies. To feed into these two provinces it will be necessary to rebuild many transmised on lines. To effectively do this work a welding set such as requested here would be most helpful.

E.H. ROGERS
Capt C.E.
Electrical Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

# HEADQUARTERS
# ALLIED MILITARY GOVERNMENT
## LIGURIA REGION
## APO 394

OFFICE OF REGIONAL ENGINEER

19 May 1945

Subject. Report from Ansaldo plant, Genova.

To. Public works and utilities sub-Commission.

1.) Submitted here with is report of electrical equipment on order with Ansaldo works Genoa.

2.) Also find report of miscellunedus equipment on order.

3.) Similar report from San Giorgio plant to follow.

ELMO E. PARKER
Capt. Inf.
P.W.& U. Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS-EMILIA REGION
ALLIED MILITARY GOVERNMENT
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2. The Società Elettrica Romagnola, an operating Company of the Società Elettrica Adriatica, operates in the provinces of Ravenna and Forli and is one of the most heavily-damaged electrical companies. To feed into these two provinces it will be necessary to rebuild many transmission lines. To effectively do this work a welding set such as requested here would be most helpful.

E.H. ROGERS
Capt C.E.
Electrical Officer

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Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LIGURIA REGION
APO 394

OFFICE OF REGIONAL ENGINEER

30 May 1945

Subject : Electric Service, Liguria.
To : PUBLIC WORKS AND UTILITIES SUB-COMMISSION, HQS. A.C.
Attn. Lt. Col. Lapper.

1) Enclosed is map indicating zones served by four distributing concerns in Liguria Region.
2) Map also indicates approximate geographical location of power plants and sub-stations which serve this Region.

1 Enclosure

ELMO E. PARKER
Capt. Inf.
P.W.&U. Officer.

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COPY

Aud/Ga

Genoa May 30th 1945

To Capt.JACKSON
10 C.R.N.

GENOA

Ferri Co.Building

Via S.Giacomo di Carignano

Our Company has gathered in several temporary warehouses in Airole,Bevera and Olivette S.Michele (Roja Valley-Imperia Province ) a considerable quantity of copper wire drawn from high tension power transportation lines which connected the hydro-electric stations of Airole and Bevera (Roja V.) to Ormoglia sub-station,destroyed by the Germans (Sept.-Oct. of last year).

Besides,our company would provided for the recovery of rich materials (copper,magnetic plates,anti friction metal) as well as the still available parts from generators and electric plants of Airole and Bevera stations,also destroyed by the Germans in September and October of last year.

Those materials are needed by our company to assure the efficiency of the power transportation and distribution systems belonging to us in Liguria and Piedmont and to provide for the reconstruction of engines and plants wanted for the restoration of Airole and Bevera hydro-electric stations.

We ask ,therfore,the autherization of taking the above said material from Roja Valley where they actually are to Savona and Genoa across the land actually occupied by the French troops.

Consider that a part of the recovered material ( copper,wires, timber trusses,metal ropes,iron material,etc.) has been exported by the French troops controlling Roja Valley without delivering any receipt of it to our company notwithstanding our claim

Thankfully yours

(Dott.Ing. Natale Balsamo)

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66-bis

DAMGES IN THE ELECTRIC TRACTION PLANTS OF TURIN DIVISION

(preliminary report)

ELECTRIC STATION -

The electric traction railway lines of Turin Division are supplied by a main system (60,000 Volts) and production or transformation stations; these stations also supply the near districts.

The stations belonging to Turin Division are the following:

1) Hydroelectric station of Bardonecchia - (property of the State Railways) Km. 16.000 - containing 5 generator groups - All the five groups have been damaged by the war - Two of the 4 water conduits and the collector have been seriously damaged - The hydraulic works are only slightly damaged -

A partial restoration of the station is foreseen within 20/5 with a power reduced to 2,000 Km. and within 15/6 with power reduced to 4,000 Km.

The complete restoration requires several months.

2) Transformation Station of Collegno (property of the S.F.) This station transforms industrial frequence (50 periods) into railway frequence power (16 periods) - Power: 13,000 Km.

Two transformers groups -

Not damaged by the war - Its efficiency depends on the possibility of being supplied with power from the Turin Electric Company. -

The normal connection line with the Company has been interrupted owing to war causes and the definitive reparations are now proceeding - They will be performed within May 20th. - However, since 2/5 it has been possible to realise a temporary connection with a station (Chiomonte) of the Turin Electric Company, which had been cut off from its Systems, and so, to supply the first electric traction railway sections in efficiency around Turin, since 4/5 -

3) Hydroelectric Stations of Acceglio and Prazzo - Km. 24,000 - Not damaged - But they have been isolated owing to serious damages in the main lines which they are connected

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by to the railway system - The first reparations of these lines are supposed to be performed within 15/5 by supplying Cuneo railway system with power.

4) Hydroelectric Station of S. Dalmazzo di Tenda -

(Ciell Company of Genoa) Km. 12,000 - Not received much news. The station has been cut off from all the main lines of connection to the railway system, owing to serious damages.

5) Hydroelectric station of Spigno (FALK Company of Milan) Km. 9 - No damages - The station could supply Asti section since the first days after a temporary reparation of the main connection line.

Sub-Stations -

Line TURIN-LODANE - Ulzio Sub-Station: high tension plants seriously damaged as well as the building - Temporary reparations are proceeding -

The works are foreseen to last a month at least.

Chiomonte-Bussoleno-Avigliana substations slightly damaged - Their reparation is almost performed - Bussoleno and Avigliana substations are in efficiency since the 8th of last month.

Line TURIN-PINEROLO - Sangone understations has been seriously damaged in the building and the main plants (60 Kv) Temporary works for restoration are proceeding - Airasca substation: serious oil losses in the transformers. They have been partially filtered and filled in order to allow their restoration with a reduced power - This has been performed the 10th of last month.

Line TURIN-CARMAGNOLA-FOSSANO-CUNEO-S.DALMAZIO -

Carmagnola substation: two transformers seriously damaged - The two others are without oil -

Cuneo substation has not been damaged -

Robilante and Limone substations have serious damages in their transformers and less serious damages in the main and secondary plants.

Impossible to get news from S. Dalmazzo substation.

Line CARMAGNOLA-BRA-CEVA -

Narzole substation: two transformers seriously damaged - The two others can be connected in an open triangle and act with reduced power.

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Line FOSSANO-MONDOVI'-CEVA-S.GIUSEPPE -

Mondovi'-Ceva-Saliceto-S.Giuseppe subatations have been slightly damaged.

Line CEVA-ORMEA -

Ceresio subetation is in good conditions -

Line ALESSANDRIA-ACQUI-S.GIUSEPPE -

Spigno and Acqui subetations: no damages -

Line ASTI-NIZZA-ACQUI -

Nizza subetation: no damages -

Line TROFARELLO-ALESSANDRIA -

Tessione-Villafranca-Asta and Alessandria: slight damages - Reparations almost performed. The underatations are efficient.

MAIN LINES -

Main Line BARDONECCHIA-COLLEGNO -

The main lines are seriously damaged in severdl points and especially at the outlet of Bardonecchia station - Temporary reparation works are proceeding - A first connection from Bardonecchia to Chiomonte is expected within 20/5 - From Chiomonte to Collegno only a tern available, used till the 7th of last month, to supply (50 periods) Collegno subetation with 7th Town Electric Company power - It is actually efficient from Collegno and Bussoleno, to supply Bussoleno and Avigliana subetations.

The complete reparation of the terns from Collegno to Bardonecchia depends on the available quantity of copper wire.

MAIN-LINES - BUSSOLENO-AIRASCA-BUSCA (2 terns)

Interrupted at many points - The reparation is within Cieli Company's competence, but this Company being now occupied with very urgent reparations has delayed the restoration till the end of this month.

MAIN LINES BANGONE-AIRASCA (two terns)

Interrupted in two points - A tern has been repaired since 8 th. last month - The other on the 10 Km. -

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16 periods main lines VAL MAIRA STATIONS-BUSCA.-CUNEO

Interrupted by the cutting down of seven couples of poles - Reparation within 15 of this month.

MAIN LINES CUNEO-CEVA

Interrupted by the cutting down of 4 couples of poles - Restoration works are proceeding.

MAIN LINES CUNEO-LIMONE - A term efficient - Works are proceeding for the other -

MAIN LINE SANGONE-FOSSANO-CUNEO - Three poles cut down near Narzole and two near Fossano - Restoration works are proceeding and will be performed within the 20th. of this month.

MAIN LINE FOSSANO-MONDOVI'-CEVA - Interrupted by the cutting down of a pole near Fossano.

MAIN LINE ASTI-ACQUI-S.GIUSEPPE - Efficient in the section Acqui - Asti - Spigno -/

MAIN LINES SANGONE-ALESSANDRIA - (2 terms) Damaged in many points by the cutting down of 9 poles - about 100 pole-tables broken - copper wire (about 150 Km.) exported - A term already repaired on the section Sangone-Pessione; Villafranca-Asti and Asti-Alessandria - The section Pessione-Villafranca is still interrupted - The interruption will probably last about a month.

The restoration of both the main lines on the whole section Sangone-Alessandria depends on the available quantity of copper wire. A great part of this wire is lacking, exported by unknown or used in the efficient term -

T.E. CONTACT LINES

TURIN-BARDONECCHIA - Reduced to simple rails along the section. Efficient from Turin to Meana -

Line TURIN-PINEROLO-BARGE - Formerly interrupted on two points between Michelino and Candiolo now repaired.

Line TURIN-ALESSANDRIA - Reduced to simple rails from Cambiano to Alessandria; efficient along the whole section, but with a foot passage between Villanova and Villafranca on Stanevasso bridge (till 12th of this month)

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Line TIOFARELLO-FOSSANO-CEVA - Reduced to simple roila - The line was interrupted near Villastellone and in Savigliano station - now restored.

Line FOSSANO-CEVA - Interrupted in correspondence with the viaducts on the Stura near Fossano, on the Ellero near Mondovi', on the Mongia near Lesegno, and on the Tanaro near Ceva.

Line FOSSANO-CUNEO-S. DALMAZZO - Interrupted near Cuneo-Fossano side, between S. Dalmazzo and Roccavione on Gesso bridge and between Roccavione and Limone on Seletta bridge.

Line CARMAGNOLA-BRA-CEVA - Several interruptions: destroyed bridges and copper wire exported between Bra and Ceva.

Line CEVA-S.GIUSEPPE - Interruptions on Covetta viaduct near Ceva on the Bormida near Cengio -

Line ASTI-NIZZA-ACQUI - Restored line - Interruprion near Asti on Tanaro bridge and near Bezzana -

Line ALESSANDRIA-ACQUI-S. GIUSEPPE - The E.T. Plants are restored - Only a railway line efficient between Alessandria and Cantalupo.

## SUMMARY ON THE RESTORATION OF E.T. PLANTS & SUPPLY OF MATERIALS

We premise that, the material stocks being exhausted, the restoration of the plants is generally performed by using materials drawn from the dissembling of the parts which may be considered as superfluous in the actual conditions of some lines.

Those lines however shall furtherly be restored -

Works are now proceeding for the restoration of a tern between Bardonecchia and Chiomonte, allowing thus to supply Collegno with about 4,000 Kw. power which Bardonecchia Station will be able to supply in the next days (engines will be restored).

Within the first May fortnight, the Cieli main Stations-Busca-Cuneo and a few days after the F.S. Cuneo-Fossano-Narzole are supposed to be restored - The power deficience for electric traction on all the main lines will so be almost totally overcome.

Before the end of May, a tern between Bussione and Villafranca will be restored.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

On electrified railway lines not yet efficient, the interruptions on the contact line will be repaired at the same time as the bridges whose damages the interruptions are caused by.

Among the first restoration works is also the doubling of the Casbiano-Alessandria-

The first quantity of materials wanted for the most urgent reparations are:

Copper wire ø 11,8 m.m. mouled for contact lines Tons 150

Copper wire ø0 m.m. for main line aluminium steel rope Tons ¼

7 steel wires ø 15/10; 26 Al. wires ø 20/10 ml. 4,000

Benzine for transformers Tons. 170

Turin May 12th 1945

CIVIL ENGINEERIG DIVISION



5868

Declassified E.O. 12356 Section 3.3/NND No. 785019

**Electric Lines:**

In order: Genova-Nervi

Genova-Ronco (through Branch line and Giovi line)

Ronco-Arquata (direct line and Isola line)

Arquata-Novi-Alessandria

Arquata-Tortona-Voghera

Genova-Ovada-Castellazzo Bormida

Ovada-Acqui

Genova-Cogoleto

Savona-Cengio (between Santuario and Sella passengers (or goods) must be change the train)

Out of order: Savona-Ventimiglia- because electric traction installations are missing and substations destroyed besides a great lot of interruptions at the railway head branch.

Nervi-La Spezia out of order owing to interruptions at the railway headbranch. The overhead lines the installations, and the engines of the substations of Sestri Levante and Levanto have been taken away.

The substation of La Spezia has been completely destroyed.

CIVIL ENGINEERING DIVISION

5867

0463

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# SITUATION

of the electric power Stations and Transformation installations of the

I.S.R. GENOVA COMP.

Of the electric power stations which have to supply the Liguria railway net, only the following are in order:

The station of Spigno: (of the Firm Acciaierie e Ferrerie Lombarde Falck) with a capacity of 6,000 Kw. (This electric power station supplies also a part of the Piedemonte Railway net).

Station of Teglia: (of the Acciaierie e Ferriere Lombarde Falck) Pontremoli, which supplies the Substations of Chiappella (I.S.R.) with a capacity of 6,000 Kw.

The Electric Power stations of S. Dalmazzo, Accoglio and Prazzo of the Firm C.I.E.L.I. (Italian Electric Company) do not actually supply el. power owing to damages at the trunk lines.

The Electric power station of Bardonecchia supplies parallel with the substation I.S.R. of Collegno, reduced quantities of electric power to the railway net which is actually not in parallel with the Ligurian net, owing to interruptions at the trunck lines. The Substation Edison in Aequata is out of order owing to bombardments.

The Electric power station I.S.R. of Morbegno (is out of order owing to war actions).
The station of the Edison (ex Cisalpina) in Ligonchio cannot supply electiv power owing to interruptions at the trunck lines.
The transformation substations are all in order, except those of Predosa, Bella, Varigotti, Albanga, Diano Marina, Taggia, Ventimiglia, Piena, Sestri, Levante, Levanto, La Spezia, Migliarina, which have been all heavily damaged or destroyed after war actions.

Genoa, 17th May 1945

5866

0464

Declassified E.O. 12356 Section 3.3/NND No. 785019

FIELD TRIP-5 June 1945

BATTIFERRO SUB-STATION
TRE MADONNE SUB-STATION
S.B.E.

RECEIVED
P W & J SECTION
13 JUN 1945 197

1. The present load at Battiferro approaches 15,000 KVA. The station is fed from Tre Madonne by two 50 KV lines; a line also continues to Ferrara . In service are 3-6000 KVA 50/3 KV 1-6,000 KVA 50/15 KV ; and 1-4000 KVA 15/3 KV transformer. Two 6,000 KVA synchronous condensers also operate from the 3 KV buss. 1-10,000 KVA 50/15 KV unit damaged by mines. Internal water cooling coils as well as windings on one phase must be replaced. 1-6000 KVA 50/3 KV unit badly damaged by mines. Coils , case and air cooling radiator need repair. 1-6000 KVA 50/15 KV unit needs transformer oil to be placed in service.

2. The Tre Madonne station is fed by the Edison and Ponale lines at 120 KV. One three winding transformer rated at 15,000 KVA 120 KV , 15,000 KVA - 50 KV and 10,000 KVA - 15 KV is in service feeding the Battiferro sub-station . This station is up to capacity load.

3. A 60 KV line from Crevalcore has been topped into Battiferro . Installation of a 6000 KVA 60/50 KV transformer now at Bassolengo will increase the load capacity for Bologna.

Clarence S. WILCOX
Major Ord.
Field Engineer

DISTRIBUTION:
Lt Col Lapper
Lt Col Parker
Major Barry
Lt Col Spann
Major Wilcox

5865

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P W & O.S.
13 JUN 1945 197

64

FIELD TRIP - 6 June 1945

F O R L I '

S E R

1. Contacted Lt Fallows regarding Forli - Portomaggiore line. Mine clearing squads have not shown up as yet although a platoon of 12 men is expected at any time. Work continues salvaging copper and insulators from adjacent unserviceable lines.

Clarence S. WILCOX
Major Ord.
Field Engineer

DISTRIBUTION:

Lt Col Lapper
Lt Col Parker
Major Barry
Lt Col Spann
Major Wilcox

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13 JUN 1945 197

63

FIELD TRIP - 7 June 1945

SAN LUCCA

S.E.F.

1. Arranged with R E M E recovery unit in Ferrara to pick up trailer at San Lucca sub-station and travel to Bussoñengo on 8 June 1945. 1-6000 KVA 60/50 KV transformer is to be loaded and brought to Bologna Battiferro Station on 9 June 1945.

Clarence S. WILCOX
Major Ord.
Field Engineer

DISTRIBUTION:

Lt Col Lapper
Lt Col Parker
Major Barry
Lt Col Spann
Major Wilcox

5863

Declassified E.O. 12356 Section 3.3/NND No. 785019

1159

Subject:- Concenter Power Station - GENOA.

RE
P.W & O. A.C.
1 JUN 1945 197

172 C.E. Works.
C. M. F.
Tel: MILAN 12241
Ref: CE/161.
Date: 2nd June 45.

DW AFHQ.

This HQ has been informed by the Edison Group that the Concenter Thermal station (capacity 50,000 KW) should be ready for operation by the end of September. Approximate coal consumption at maximum output is 1,000 tons per day. It is presumed that the decision to run this station, which is the most efficient thermal station in the area, will rest with the Central Electricity Board as all military requirements are fully met from the existing supplies.

Brigadier,
Chief Engineer.

/GTQ.

Copy to:- Central Electricity Board.

0 4 6 81

Declassified E.O. 12356 Section 3.3/NND No. 785019

Compagnia Imprese Elettriche Liguri
(CIELI)

60

Ref: Chi/pm File Elect Hydr Ital

Genova, May 26-th, x 1945.

PRO MEMORIA

In the afternoon of May 8-th, 1945 - Mr.Alessandro Bosis, engineer of the CIELI =Compagnia Impreso Elletriche Liguri= has x been arrested and taken away by motor-car by the french military authorities.(He was taken away from S.Dalmazzo di Tenda).

On May 12-th the french military authorities have interrupted the telephone line which from S.Dalmazzo di Tende through Cairo Montenotte allows the CIELI to transmit needed orders and x communications to her electric plants of the Alta Valle Roia. This fact has naturally made impossible to get news regarding the fate of our Engineer.

According to information issuing from various sources it seems that engineer Bosis has been taken to Nizza where he is at a certain Hotel Suisse in state of emprisonment.

Mr.Alessandro Bosis has from the CIELI the functions of chief of the exploitation of the electric plants of all the 3 valleys of the Roia, the Maira and Varaita.

The sudden emprisonment and unawaited departure of Mr.Bosis, our engineer, from S.Dalmazzo di Tenda, - has made difficult the organisation of the services of the CIELI and this not only in the Valli Roia, but also in the Valle Maira and Varaita, from which depends the great part of energy-production for all the region of Liguria. This difficulty will be clear and evident if you take into consideration the persistent deficiency of railway-communications, as well as road-connections and telephone and post-contact in the various provinces.

It is absolutely indispensable that Ing.Alessandro Bosis should be the quickest possible restituted to his functions and should be also authorised to visit freely the CIELI office of Cuneo, which is his normal labour cehtre.

Signed:

Cillieri

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0469

Declassified E.O. 12356 Section 3.3/NND No. 785019

June 1-rst,1945.

PRO MEMORIA : Destruction of hydro-electric plants of BEVERA and AIROLA in the VALLE ROIA.

During a recent visit by our engineer Mr.Audoli to the Valle Roia he could make the necessary constatations regarding the gravity of the destruction-damage, done by germans to the hydro-electric plants of BEVERA and AIROLE.

The BEVERA plant: the generators machinery (hydraulic and electric) is totally destroyed, because of meticulous incertment of explosive loads in the inmost interior of the machinery, the loads beeing afterwards blown up. The rotative valves at the end of the power conduct (regulating the admission of water into the turbines) are entirely ruined. The spirals-boxes of both turbines are split and the motor-wheels severely damaged because of great explosive loads have been placed right into their centre. All the regulating mechanisms have been destroyed by violence of the explosion-shock. The 3-ph. electric generators are unusable and are practicly reduced to a mass of ruins by explosive loads damaging both stator and rotor of the same.

All the electric apparatus of plant is damaged and is definitively and irreparably ruined by fire, which took place afterwards in the indoors part of plant.

The squad of damagers, not content with destroying generators-machinery by explosion,-has also broken up the transformers casks, letting out the oil and burning it afterwards. To render the fire more active -special substances were used by way of injecting into the interior of the plant. This fire went on for about 2 days and destroyed practicly everything remaining yet intact after the first destruction by explosion.

The buildings have suffered very severely, probably irreparably. The roof is completely destroyed, the ceiling of metal armature and concrete badly damaged. The perimetre walls (notwithstanding metal-armature protection) shall have to be taken down, and it shall not be possible to use them when reconstructing the plant. The loading-dock (basin) of the turbine-power conduct is most gravely damaged by explosion of a great explosive-load and the guards house is completely destroyed.

The AIROLE plant: the generators machinery and the electric apparatus are damaged equally to those of the BEVERA plant; the perimetre walls have been demolished as well as the roof of the machinery-room and the low-tension apparatus. The other buildings are damaged by fire, set by the same method as at BEVERA.

The power-conduct is spoiled near the terminal ammarage-block by explosion of a great explosive-charge, which has completely destroyed a part of the pipe-systems; the house used for the personal and situated near the plant is completely de troyed and reduced to a mass of ruins of masonry.

Concluding- all generating machinery, apparatus of high and low tension, and transformers (elevating tension) -are a mass of wreckage and there is nothing else to be done as to recuperate the raw metalic materials remaining so as to use them for the construction of new machinery.

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Sacco

0 4 7 01

Declassified E.O. 12356 Section 3.3/NND No. 785019

Compagnia Imprese Elettriche Liguri
(CIELI)

Ref: Aud/gm. Genova, May 30-th, 1945.

Captain PARKER
H.B.M. A.M.G.
Public Works & Utilities
Palazzo Navigazione Generale Italia

Genova
Piazza de Ferrari;

Our firm has collected and stocked in various deposits of fortune in provinces of Imperia communes of Airole, Bevera and e.Olivetta S.Michele in the Valle Roia - a notable quantity of copper wire, recuperated from electric-lines (high tension) connecting the hydroelectric plants of Airole & Bevera (Valle Roia) to the sub-station of Oneglia, destrupked by the germans in september-october of the past year.

Besides this, our firm should like to recuperate the rich materials (copper, magnetic sheets, antifriction-metals) as well as the still usable parts of the electric generators and of the electric apparatus belonging to the plants of Airole and of Bevera, destroyed by germans in september and october past year.

These materials are absolutely indispensable to us for efficient maintenance of our vast net of transport of electric energy in Liguria and in Piemont, as well as for the reconstruction of the machinery and apparatus necessary for the renewal of the hydroelectric plants in Airole and in Bevera.

We ask to be authorised to transport the above-mentioned material from the Valle Roia (where they actually are) to our magazines in Savona and in Genova, crossing the zone actually occupied and administrated by french troops.

We inform you by the present that a part of the recuperated materials such as copper tresses, timber trusses, metallic cables, iron materials - have been taken by the french troops controlling the zone of the Valle Roia. Our firm has not recieved, notwithstanding reclamation,- any receipt or specification of the materials taken.

With our best salutations

CIELI
Signed: Balsam.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Compagnia Imprese Elettriche Liguri
(CIELI)

Genova, May 30-th, 1945.

Ch/pm

PRO MEMORIA

On May 8-th 1945 French Military Authorities have arrested Mr.Alessandro NOSIS, Engineer, who is Director ( for the CIELI) of the hydroelectric plant of S.Dalmasso di Tenda. Mr.Nosis has been taken to Nice, where he is imprisoned till to day at the hotel Suisse.

On May 9-th the CIELI plant of S.Dalmasso di Tenda was visited by Mr. Jean Mondeden, engineer of the society "Electric Industrial Energy" who declared he was empowered by the French Military Authorities to assume the direction of the above named plant, and this without any other explanations.

One of the first orders given to the personal of the CIELI by Mr.Jean Mondeden of "Industrial Energy" was to suspend the works on the reactivation of the 70 KV line running from S.Dalmasso to Cairo for Genova. In this way the work of CIELI shall be used for the reactivation of the line S.Dalmasso di Tenda - Ventimiglia for Mentone.

On the day of May 25-th 1945 Mr. Mondeden brought to S.Dalmasso a certain quantity of "Enrolling and indication-sheets" headed by "Society of industrial energy - Net of the Var and of the Maritime Alps - Regional Direction of Nantes".---

The above mentioned French engineer invited the book-keeper of the CIELI to fill up this forms and make them afterwards signed by all the employees. Till to day 16 results that only a minimal part of the CIELI personal has signed this sheet, because the great majority of the personal have taken the decision to remain in dependance of the their old Italian society.

Signed:

5858

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Tel. 12407
Ext. 2218

RECEIVED
P.W. & U. S/C A.C.
6 JUN 1945 197

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LOMBARDIA REGION
APO 394

Public Works and Utilities Division

PWU/16.5

5 June 1945

SUBJECT: Società Vizzola - Lombardia.

TO : Hq. Allied Commission, APO 394.
(Attn.: Lt.Col. Lepper - P.W.U. Sub-Commission).

1. The Vizzola Co. has requested permission for their General Manager Ing. Guglielmo Castelli, to go to Switzerland. The purpose of this visit is to discuss the importation of electric power from Switzerland into Italy.

2. The Vizzola Co. has raised the question of the payment for electric power which may be imported from Switzerland.

3. Enclosed are two letters from the Vizzola Co. One letter requests permission to go to Switzerland. The other letter requests information on the question of payment for electric power which may be imported from Switzerland.

4. These requests are submitted to you for necessary action.

For the Regional Commissioner:

C.P. Bolick.

C.P. BOLICK,
Colonel, F.A.,
Regional Engineer.

INCL.:
Letter Vizzola Co. dated 4 June.
" " " " " "

the original letters have been forwarded to Economic Section
11 June 1945

See Folio 36
File 095

5837

Declassified E.O. 12356 Section 3.3/NND No. 785019

COPY

SOCIETA' VIZZOLA

Busto A., 4th June 1945

Ref. Cs/7389
To : ALLIED MILITARY GOVERNMENT
Palazzo Montecatini , MILANO

Our object in writing you is to let you know what follows :

Our company buys electric energy from the Swiss Company head of "Brusio Power Co." (S.A. Forze Motrici di Brusio) which has its office in Poschiavo (Switzerland - Cantone dei Grigioni) and a capitel stock of S. Fr. 5,000.000.==.

The yearly quantity of electric energy sold by the "Brusio Co." amounts to about 150,000 kWh, of which 90,000,000 are delivered during the winter time (from October till March) and 60,000,000 during the summer time.

The delivered power is about 50,000 KW and the value of the above mentioned supply of energy is about S. Fr. 2,700,000.==

This energy, together with the energy produced by our plants, is distributed by our company to over 150,000 customers in our distributiod territory in the provinces of Milan - Varese - Como - Sondrio - Bergamo and Novara.

Many important textile, mechanical and cotton works are among our customers.

The energy sold to us by the "Brusio Co." amounts to about 20% of the total energy distributed by our company and it covers 33% of the power required by our load. The Brusio energy supply is particularly important during the winter season (from November till April): As a matter of fact hearly all Brusio energy is produced by water stored in the reseveirs of the above mentioned Company located in the Bernina Mountains, while the main part of energy of our own production is generated by flowing water plants. In other words the Brusio plants are complementary of our plants and without them our Company would not be able to meet entirely the energy requirements of our customers, specially during the winter time and in the near future, when we shall be probably called to send energy to Southern and Central Italy.

---

We used to pay the "Brusio Co." for the energy by means of Italian Swiss Clearing-house, which has worked fairly well till about the end of 1942.

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./.

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Through this clearing-house our remittances of Italian currency to the Bank of Italy had a corrispondent income of Swiss currency for the Brusio Co. with a maximum delay of some months.

But, from October 1942 the payments have been practically suspended. As a matter of fact the "Brusio Co." never had any more income of Swiss currency corrisponding to the remittance of Italian currency regularly made by us.

This situation caused at first many entreaties from the "Brusio Co." and at the end the practically complete suspense of energy delivery.

---

The purpose of the present letter is to inform the A.M.G. about this situation. We beg the A.M.G. to let us know what we must do; as a matter of fact we can't do anything to hasten the payments and the other side our company needs the Brusio energy, as already told.

As for the future, we don't see other solution except to find the possibility of paying the imported energy or by a "Clearing or by an exchange of goods", for instance electric energy against silk.

Besides that the problem of paying the debt which has grown up from October 1942, is still to be solved. This debt, with the invoice related to the Brusio energy purchased during September 1943, amounts already to S. Fr. 2,706,635.

As soon as possible our General Manager Dr.Eng.Guglielmo Castelli will go to Switzerland for a preliminary meeting with the Brusio Managers Dr. Sarasin and Eng. Rickenbach and he, on his return shall relate to the A.M.G. about the above mentioned meeting for the purpose of receiving from the A.M.G. the necessary instructions to decide the question.

Trusting to have a reply at your earliest convenience, we remain,

Yours truly

VIZZOLA S.p.a.

Declassified E.O. 12356 Section 3.3/NND No. 785019

COPY

Busto A. 4th June 1945

To : ALLIED MILITARY GOVERNMENT
Palazzo Montecatini
Via Principe Umberto, 18
MILANO

The undersigned Dr.Eng.GUGLIELMO CASTELLI, General Manager of the "Vizzola Electric Company" and Vice President of the "Brusio Power Co." (which has its offices and plants in Switzeland) makes known that he has to meet periodically in Switzerland the President, Dr. Sarasin, and the General Manager Dr.Eng.Rickenbach of the Brusio Power Co. to discuss technical and economical matters related to the electric energy supplied by the "Brusio Co." to the "Vizzola Co.". The details of the subjects are to be discussed are shown in the enclosed copy of the letter sent to-day to the A.M.G. in Milan For the time being those meetings will be held once a month in June, July, August and September.

Therefore the undersigned requests the Allied Military Government for a permit of going to Switzerland to attend the above mentioned meetings.

The undersigned makes also known that he has always been provided with the frontier card. N° 1998 issued by the Italian Authorities and confirmed by the Swiss Authorities.

A photographic copy of the above mentioned card is herewith enclosed.

Trusting to have a reply as soon as possible the undersigned remains,

Yours truly,

GUGLIELMO CASTELLI

5854

Declassified E.O. 12356 Section 3.3/NND No. 785019

Bolzano 2 May 45

57

Subject: High Tension Line Trial.

To: S.S. Lt. Col. Edmund Reuter - Athletic - Roma.

(1) Herewith is a little article on my first experiment. These fellows want to complete a power line began by the Germans. Maybe you could allow them, & maybe not. Also they - 30.000.00 lire worth of equipment may be helpful some where in the south.

(2) Lt Col. Thompson, Deputy Prov. Com. of Bolzano Province has asked them questions concerning what is their project, when it comes with us that it is forwarded to you.

E. Feldman
Maj. AUS.

RECEIVED
P.W. & U. S/C A.C.
- 6 JUN 1945 197

To the

A. M. G.

Brixen.

Brixen, the 23th May 1945

# I n f o r m a t i o n

The "Energie" is a company with limited guaranteed, founded in Bozen the 1945 for the construction of electrical plants.

The office in Brixen - Villa Alexandria tel. 190 - has the job of constructing the high tension line 120.000 Volt from Brixen to Innsbruck for transportation of electrical power from South Tirol to North Tirol and from North Tirol to South Tirol.

The Calculation and inspection of the high tension line has bin made by the Elin & Schorchwerke in Vienna. The material was furnished from italian work-shops, the work was done by italian enterprises.

Because the plant is important to the economy, the authority of the province and the government has helped to furnish material, and also to transport this material, and kept the workers from military service.

The work was begun in February 1944 and approximately 200 workers were emloyed. The work was suspended till the 28th April 1945 because the province was occupied and the workers departed. For the workshops are occupied 17 storerooms.

Material: The greet part of the material for the finish of one line is here; the rest is in Trento, Vobarno and Milan. Here is material worth approximately 30.000.000 Lire.

Employees: The employees working on the South-line should be paid approximately 150.000 Lire. The employees working on the North-line cannot be paid because we do not have the list of pay-checks for April. Thia list of pay-checks is at Matrei (20 km north of the Brenner).

Transportation of a wounded. The engineer, Erich Unterweger, of Sterzing (Vipiteno) and his chauffer, Oberhuber, of St. Leonhard- Brixen, were stopped on the 24/25th april 1945 in Nave near Brescia by the partisans and the chauffer was wounded. The partisans took him to a military hospital in Nave

Declassified E.O. 12356 Sec. 3.3/NND No. 785019

A. M. G.

Brixen.

Brixen, the 23th May 1945

## Information

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Declassified E.O. 12356 Section 3.3/NND No. 785019

R.W.& U.S/C

Subject:- Electricity Supply - Area FORLI - RAVENNA - RIMINI.

RECEIVED
P.W. & U.S/C A.C.
- 5 JUN 1945 197

C.E. No 1 District.
No. 166 C.E. Works.
CE 3940/1.

2 June 45.

D.W., A.F.H.Q.
67 CMB Wks.

Copy to:- H.Q., A.C.
540 E & M. Coy. R.E.
25 E & M. Pl. R.E.

56

Further to conversation Lt. Col DRURY - Major MACKENZIE.

1. A meeting was held in BOLOGNA on 1st June 45 at which representatives of CE No. 1 District, H.Q. AC. (Elec. Div), A.C. EMILIA Region and the BOLOGNESE and ADRIATICA Electric Power companies were present.

2. It was agreed that the best line to repair, in order to get an early and satisfactory supply of power into the FORLI - RAVENNA area, was the 50 KV line PORTO MAGGIORE - COTIGNOLA - FORLI.

3. Arrangements have therefore been made to employ 25 E & M. Pl. of 540 E & M. Coy. R.E. on this job. The O.C. Lt. FALLOWS, R.E. is to be the supervising officer.

4. Major WILCOCKS of AC (Elec Div) is arranging co-operation with the civilian companies concerned and has arranged for Capt. STEVENS to be the liaison officer for this work. Capt. STEVENS will have his office at FORLI.

5. The civilian companies are putting working parties on the line forthwith working under the direction of Lt. FALLOWS, R.E.

6. The civilian companies are supplying the necessary transformer and switchgear for transformation of 50 KV to 15 KV at FORLI and connection into the existing grid. This transformer will come from BUSSOLENGO.

7. Arrangements have been made in conjunction with AC for the required quantity of 7/080" copper conductor to be supplied, either by redrawing the required quantity from scrap at present available or by stripping a spare line in the UDINE area.

8. All the necessary hardware can be obtained by stripping the 50 KV lines ARIENTA-RAVENNA and RAVENNA-CESENA.

9. All the power required in this area will be available at PORTO MAGGIORE by 5 June 45 on one circuit and on 12 June 45 by a second circuit. It is anticipated that a peak of 5000 KW will suffice.

5857

10. It is considered that this job should be completed in approx. 10 weeks, assuming no undue delay in mine clearance and the supply conductor is experienced.

HEADQUARTERS

Declassified E.O. 12356 Section 3.3/NND No. 785019

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7. Arrangements have been made in conjunction with AC for the required quantity of 7/000" copper conductor to be supplied, either by redrawing the required quantity from scrap at present available or by stripping a spare line in the UDINE area.

8. All the necessary hardware can be obtained by stripping the 50 KV lines ARGENTA-RAVENNA and RAVENNA-CESENA.

9. All the power required in this area will be available at PORTO MAGGIORE by 5 June 45 on one circuit and on 12 June 45 by a second circuit. It is anticipated that a peak of 5000 KW will suffice.

585

10. It is considered that this job should be completed in approx. 10 weeks, assuming no undue delay in mine clearance and the supply conductor is experienced.

HEADQUARTERS
4 GIU 1945
R. C.

H. Alexander Pringle
Brig.
C.E.

EJR/FJC.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

P.W.&U. S/C

55

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LIGURIA REGION
APO 394

OFFICE OF REGIONAL ENGINEER

RECEIVED
P.W. & U. S/C A.C.
2 JUN 1945 197

30 May 1945

Subject : Electric Service, Liguria.
To : PUBLIC WORKS AND UTILITIES SUB-COMMISSION, HQS. A.C.
Attn. Lt. Col. Lapper.

1) Enclosed is map indicating zones served by four distributing concerns in Liguria Region.

2) Map also indicates approximate geographical location of power plants and sub-stations which serve this Region.

A.C.C. HEADQUARTERS 2 JUN 1945

1 Enclosure

ELMO E. PARKER
Capt. Inf.
P.W.&U. Officer.

Adapted in R.
11/6/95

Declassified E.O. 12356 Section 3.3/NND No. 785019

54

tel.26064
ext.53

VENICE OFFICE
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB COM.
ALLIED COMMISSION
A P O 394

RECEIVED
P.W. & U. S/C A.C.
2 JUN 1945

May 29 1945

PWV/DP

SUBJECT: Schedule of Repairs to Transmission Lines of the Societa Adriatica di Elettricita

TO: Chief Milano Office, Elec.Division, P.W. & U. S/C Aloom

The S.A.D.E. has presented a plan of repairs to their 130 kV. and 50 kV. transmission lines. We agree with the major parts of their plan and have advised them to begin work at once on the following schedule.

I. = Lines north of the Po River the repair of which will connect operable generating plants to the system.

| Line | Towers damaged | Conductor spans broken | Conduct.spans missing | Completion date |
|---|---|---|---|---|
| 130 kV.Polpet-Sospirolo | 4 | -- | 6 | 7 June |
| 130 kV.Nove-Careva | 2 | -- | 15 | 7 July |
| 130 kV.Doblari-Opicina | n o | r e p o r t | | 30 June |
| 130 kV.Mori-Bussolengo | n o | r e p o r t | | -- |
| 50 kV.Nove-Treviso | 12 | | 15 | 1 Sept. |

II. = Lines between the Po and Reno Rivers the repair of which is necessary to supply the distribution between the rivers and to supply electricity to the 50 kV. lines south of the Reno River.

| | | | | |
|---|---|---|---|---|
| 50 kV.Rovigo-Ferrara | 7 | 50 | 4 | 12 June |
| 50 kV.Ferrara-Portomaggiore | 1 | 90 | 1 | 5 June |
| 50 kV.Codigoro-Portomaggiore | 2 | 40 | 1 | 12 June |
| 50 kV.Bologna-Portomaggiore | 2 | 50 | 1 | 19 June |
| 50 kV.Portomaggiore-Argenta | 2 | 50 | 2 | 30 June |

It is also necessary to establish temporary outdoor 50/10 kV. transformation and switching equipment at Codigoro, Portomaggiore and Argenta to supply the distribution in the area.

./.

Declassified E.O. 12356 Section 3.3/NND No. 785019



To Milan Office Elec.Div. - Schedule Repairs transmission lines of SADE-5.29.

III. - Lines south of the Reno

| Line | Towers damaged | Conductor spans broken | Conductor spans missing | Completion date |
|---|---|---|---|---|
| 50 kV.Argenta-Cotignola | 42 | No report | 10 tons of copper | --- |
| 50 kV.Cotignola-Forlì | 68 | No report | 25 tons of copper | -- |

It is also necessary to construct a temporary 50/10 kV. substation at Forlì.

The lines without estimated dates of completion are those for which transportation and materials must be obtained. Transportation is also required for moving transformers from Venice, Ferrara and Bologna for the four temporary substations.

Some delays are to be expected because of the shortage of petrol and trucks in this area.

P. M. Vannoy, Capt.
for Chief Venice office

cc. Lt. Col. Lapper ✓
cc. Major Knight

Distribution:
Lt.Col.Lapper
Maj. Knight
File

VENICE OFFICE
29.5.44
Electrical Division

[illegible]
(Centrali di produzione dell Energia Elettrica)

[illegible]
(Relazione Settimanale sulla Produzione)

Name of Company (Società) SOCIETA' ADRIATICA DI ELETTRICITA'

Address of Company VENEZIA - S. Marco, 4423 A -

| Name of Station (Centrale) | Units generated kWh (energia prodott.) | Max load kW (carico massimo) | State of Reservoir in x 10⁶ m³ (situazione dei Serbatoi) |
|---|---|---|---|
| Hydro Stations (Idroelet.) | | | |
| Padalto | 2.204.000 | | |
| Nove | 2.004.000 | | |
| S. Floriano | 183.000 | 91,500 | S. Croce 63,4 |
| Castelletto | 293.000 | | Morto 0,8 |
| Caneva | 1.514.000 | | |
| Livenza | 455.000 | | |
| Malnisio | 811.000 | | |
| Giais | 457.000 | 10,600 | |
| Partidor | 252.000 | | |
| Padesalto | 552.000 | 4,100 | |
| Serio | 1.665.000 | 10,000 | |
| Pelos | 501.000 | | S.Caterina 5,9<br>Comelico 1,1 |
| Doblari | 49.000 | 300 | Podisele |
| Cencenighe | 1.128.000 | 45.000 | (no report) |
| Agordo | 1.150.000 | | Alleghe 3,7 |
| Stanga | 798.000 | | |
| +Thermal St. (incluso Diesel)<br>(Termiche (incl.quelle Diesel) | | | |

5847

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| Name of Station (Centrale) | Units generated kWh (energia prodotta) | Max load kW (carico massimo) | State of Reservoirs (1 a x "0" condition - 2. Scarico) |
|---|---|---|---|
| Hydro Stations (Idroelettriche) | | | |
| Fadelto | 2.204.000 | | |
| Nove | 2.004.000 | | |
| S. Floriano | 183.000 | 91,500 | S. Croce 63,4<br>Morto 0,8 |
| Castelletto | 293.000 | | |
| Caneva | 1.514.000 | | |
| Livenza | 455.000 | | |
| Malnisio | 811.000 | | |
| Giais | 457.000 | 10,600 | |
| Partidor | 252.000 | | |
| Padesalto | 652.000 | 4,100 | |
| Sorio | 1.665.000 | 10,000 | |
| Pelos | 501.000 | | S.Caterina 5,9<br>Comelico 1,1<br>Podisele<br>(no report) |
| Doblari | 49.000 | 300 | |
| Cencenighe | 1.128.000 | 45.000 | |
| Agordo | 1.150.000 | | Alleghe 3,7 |
| Stanga | 798.000 | | |
| +Thermal St.(include Diesel)<br>(Termiche (incl.quelle Diesel) | | | 58,7 |
| T O T A L (totale) | 14.116.000 | 161.500 | 74,9 |

Report for Midnight Saturday 26 May 1945
Relazione all mezzanotte del Sabato

Signed (Firmato) [signature]

+(Complete the data on back for Thermal Stations)
(Per le Centrali Termiche completare i dati a tergo)

Declassified E.O. 12356 Section 3.3/NND No. 785019

## [illegible] STATIONS
(Centrali Termiche per la Produzione dell'Energia)

## [illegible] REPORT
(Relazione Settimanale sul Combustibile)

| Name of Thermal Station (Centrale Termica) | | Fuel in stock at beginning of week (combust.in magazzino al principio della settimana) TONS (tonn.) | Fuel delivered during the week (combust. consegnato durante la settimana) TONS (tonn) | Fuel used during the week (combust.) impiegato durante la settimana TONS (Tonn) | Fuel in stock at end of week (combust.in magazzino a fine settimana) TONS (Tonn.) |
|---|---|---|---|---|---|
| Marghera | Coal Carbone | 1.320 | = | = | 1.320 |
| | Oil Nafta | = | = | = | = |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| Name of Thermal Station (Centrale Termica) | | Fuel in stock at beginning of week (combust.in magazzino al principio della settimana) TONS (tonn) | Fuel delivered during the week (combust. consegnato durante la settimana) TONS (tonn) | Fuel used during the week (combust.) impiegato durante la settimana TONS (Tonn) | Fuel in stock at end of week (combust.in magazzino a fine settimana). TONS (Tonn.) |
|---|---|---|---|---|---|
| Marghera | Coal Carbone | 1.320 | = | = | 1.320 |
| | Oil Nafta | = | = | = | = |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |
| | Coal Carbone | | | | |
| | Oil Nafta | | | | |

Report for Midnight Saturday 26 May 1945 1945
Relazione alla mezzanotte del sabato

(Signed (firmato) ing Romini

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RECEIVED
P.W. & O. S/C A.G.
1 JUN 1945 197

ENGINEER SECTION (SR)
A.F.H.Q.
G.H.Q.
Tele. No. Freedom 813

R 53

NND/2002

26 May 43

SUBJECT: Power Transmission Lines

TO : OC 8 Army
CG 5 Army (for ADC Hr Inor)
OC 1 District
OC 2 District

1. Attached hereto is list of power lines on which we are requiring information.

2. Will you please report on lines in your area stating if they are working, if not, whether badly damaged and if possible date of likely commissioning.

3. Please treat as urgent.

C.J.C. DREW,
Lt-Colonel, R.E.,
for Brigadier,
Director of Works.

5846

Copy to: AC (Electrical Division Public Works & Utilities Sub-Division).
OC 15 Army Group.

Declassified E.O. 12356 Section 3.3/NND No. 785019

nr. 200

Rome May 28th 1945

48

Reference 197 / PWU

To A.C. HQ.
P.W. & U. Sub-Commission
Electrical Division

52

Subject :
List of electrical
equipment -

I received your letter mentioned above.

I am sending letters to the Companies to pass on to them your Informations.

Eng. A. Asta

"Ispettorato Generale"
for Electricity Water and Gas

AA/ac

Declassified E.O. 12356 Section 3.3/NND No. 785019

pr. 199

Rome May 28th 1945

Reference 197/PWU

Subject :
Edison Group - (40)

To A.C. HQ
P.W. & U. Sub-Commission
Electrical Division

I received your letter mentioned above.

I thank you for your informations on the Central stations of Edison Group, requisitioned by French Military Forces, and hope that this question may be satisfactorily settled and no similar question will arise in future.

Eng. A. Asta
" Ispettorato Generale"
for Electricity Water and Gas

AA/ac

Declassified E.O. 12356 Section 3.3/NND No. 785019

'nr. 198

Rome May 28th 1945

file 50

Reference 197/PWU

(39)

To A.C. HQ
P.W. & U. Sub-Commission
Electrical Division

Subject :
Financial SIP -

I received your letter mentioned above.

The answer to SIP question will be given after Mr. Visentini will be in Rome. In the mean-while I am asking for having informations from the Ministry of Finances.

Eng. A. Asta

" Ispettorato Generale "
for Electricity Water and Gas

5843

AA/ac

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.478200 HEADQUARTERS ALLIED COMMISSION CCB/cc
APO 394
Public Works and Utilities Sub-Commission

49

197/PWU. 26 May 45.

SUBJECT: Visit to North Italy.

TO : The Commissioner, AMG, Naples Commune.

(42)

1. Reference our 197/PWU. dated 22 May 45, and telephone conversation, Commissioner - Lt.Col. Lapper.

2. It is regretted that owing to a clerical error the documents referring to Pescara III were forwarded direct to Eng. Masturzo.

By command of Rear Admiral STONE:

W.M. LAPPER,
Lieut-Colonel,
Chief,Elect.Div.

5842

0 4 9 31

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081
Ext. 317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

48

Reference : 197/PWU

24 May 1945

Subject : List of electrical equipment

To : MINISTRY OF PUBLIC WORKS (Att Eng. Astn)

1. Attached copy of a list received from Capt. Parker - Public Works and Utilities Officer in Liguria is sent to your attention.

2. This list includes electrical equipment on order with Ansaldo Works - Genoa.

W.M. LAPPER
Lieut-Colonel,
Chief Elec. Div.

1 enclosure

52 copies

5841

0494

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COPY

A N S A L D O

ANSALDO ENGINEERING WORKS

18th May 1945

LIST OF THE MAIN WORKS BEING CARRIED
OUT IN CENTRAL AND SOUTHERN ITALY

---

SOC. ELETTRICA SARDA - Rome - N° 2-22.500 kVA transformers 120.000/74.000 - 50 cycles natural cooling - for the Villasor substation. The first unit was requisitioned by the Germans and sent to Germany. This unit requires all materials for its reconstruction. The 2nd unit which has also been requisitioned is in our shop for finish working, so far it is by 60% finished. Most of the materials are on hand.

AZIENDA GOVERNATORIALE ELETTRICITA' ED ACQUE - Rome - N° 1 generator 25.000 kVA - 9.000 Volt - 3.700 r.p.m. 45 cycles for the Steam Power plant in Rome. The materials are already for assembling in the power plant.

LARDARELLO S.A. PER LO SFRUTTAMENTO DELLE FORZE ENDOGENE - Florence

1) - N° 4 generators 30.000 kVA - 10.500 V. - 3.000 r.p.m. 50 cycles for the Lardarello Power Plant.
Average percentage of carried our work : 40%
Large part of the materials is on hand.

2) - N° 2 three-phase transformers 6.000 kVA - 10.500/4.500 V. - 50 cycles, natural cooling - for feeding the auxiliary services of the power plant for the 30.000 kVA set.
Percentage of carried out works : 75%
Large part of the materials is on hand.

3) - Generator repair : 930 kVA
Percentage of carried out work : 10%
Small part of the materials is on hand.

4) - Reserve parts of exciting machines for generators of 15.000 kVA already furnished.
Percentage of carried out work : 0%
No material on hand so far.

5) - N° 1 generator 4750 kVA - 4500 Volt - 3000 r.p.m. - 50 cycles destined to the power plant of Sasso Pisano.

SOC. GENERALE ELETTRICA DELLA SICILIA - Palermo - N° 1 couple of generators destined to the construction of a Ljungstrom generating set - 14.300 kVA - 9000/11000 Volt - 3000 r.p.m. - 50 cycles

./.

Declassified E.O. 12356 Section 3.3/NND No. 785019



destined to the steam power plant of Porto Empedocle.
Percentage of carried out work : 60%
Large part of the material is on hand.

800. TERNI - Genova - N° 1 generator 60.000 kVA - 12.500 Volt 315/375 r.p.m. - 42/50 cycles, destined to the power plant of S. Giacomo al Vomero (Terni).
Some parts of the generator have already been forwarded in due time to the power plant.
The remnant parts are ready to be forwarded for assemblage on the site.
Most of the materials are on hand.

ENTE AUTONOMO DEL VOLTURNO - Naples - N° 4 transformers 100 kVA and N° 3 - 75 kVA - 500/270-260-250 Volt - 44 ± 2 cycles.
Percentage of carried out work : 40%
Part of the materials is on hand.

AZIENDA AUTOFILOTRANVIARIA - Naples - N° 8 transformers for rectifiers (1500 kW - 600 Volt c.c.) - 2085 kVA - 8825 ± 5% Volt primary 45 cycles with controlling coils and anodic partitioners destined to the substations of the Naples trolley-busways.
Percentage of carried out work : 20%
Large part of the materials is on hand.

AZIENDA AUTOFILOTRANVIARIA - Naples - N° 20 electric equipments for trolley-busses with 135 H.P. traction motors.
N° 2 complete equipments delivered to customer in due time.
Out of the remaining 18 equipments the situation is the following :
N° 14 requisitioned by the Germans.
N° 4 given over for the Azienda Comunale Navigazione Interna Lagunare Venezia.
Materials for the reconstruction : none
Percentage of carried out work : 0%

SOCIETA' ANONIMA SICILIANA TRASPORTI - Palermo - N° 9 153 HP traction motors - 1 reserve armature for the trolley-busses.
Percentage of carried out work : 70%
Large part of the materials is on hand.

Declassified E.O. 12356 Section 3.3/NND No. 785019

0 4 8 6 1

Lt Col Boxshall
Maj Price RE
File Fleet Hqrs Italy

47

To:- Lt Col Zapper
From:- Capt Beal
Subject:- Visit to Brown Boveri
Date: 17 May 1945

Servizio Prov. Materiali

SICILY Electric Coy. The parts for the turbo-alternator are in Milan and ready to be shipped. They were made in the Servizio Works and the Milan has been told not to part with them until payment is made to Switzerland in Swiss Francs.

Rovelli requisit.

S.R.E. Milan works are in a position to re-insulate the Farfan I alternator coils, or make new ones, if the copper is supplied. Time required - about 1½ months
a letter is attached for their Rome office instructing them to visit Farfa and obtain full particulars.

General. We went round the works and saw a lot of electrical work in progress - Transformers, alternators, motors and switchgear. The works have only been slightly damaged. They have a limited hidden stock of insulating materials, but are very short of copper and porcelain insulators.
about 2,000 workmen are employed

5833

H V Beal Capt R.A.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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P.W. & U. S/C A.C.
25 MAY 1945 197

HEADQUARTERS=EMILIA REGION
ALLIED MILITARY GOVERNMENT
APO 394
Public Works and Utilities

46

22 May 1945

Reference: RIX/PU/02.6

Subject : Request for shop truck

To : Electrical Section
Public Works and Utilities Sub-Commission
Allied Commission

1. Request that one shop truck suitable for acetylene and electric welding be made available to Societa Elettrica Romagnola, Ravenna. It is suggested that a truck such as used by U.S. Army Engineers, the Truck,shop,motorized,2 1/2 ton.,or its equivalent, would be most suitable for the type work this company must undertake.

2. The Societa Elettrica Romagnola, an operating Company of the Societa Elettrica Adriatica, operates in the provinces of Ravenna and Forli and is one of the most heavily-damaged electrical companies. To feed into these two provinces it will be necessary to rebuild many transmiss on lines. To effectively do this work a welding set such as requested here would be most helpful.

E.H. ROGERS
Capt C.E.
Electrical Officer

5837

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 12407
Ext. 218

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LOMBARDIA REGION
APO 394

Public Works and Utilities Division

PWU/5

23 May 1945

SUBJECT: Power Plants - Lombardia Region

TO : Hd.Qtrs. Allied Commission
Public Works and Utilities Sub-Commission
Electrical Division
( Attn: Lt. Col. Renton ).

1. Herewith list of Power Plants operating in the Lombardia Region.

For the Regional Commissioner:

RECEIVED
P.W. & U. S/C A.C.
25 MAY 1945
197

C.P. Bolick.
C.P. BOLICK,
Colonel, F.A.,
Regional Engineer.

Encl: List of Power Plants

RAR/gi

1 copy for Colonel Renton
1 " " Eng Barlow

583

Declassified E.O. 12356 Section 3.3/NND No. 785019

1-

## POWER PLANTS LOMBARDIA REGION

| PLANT | SOCIETY | INSTALLED CAPACITY | OUTPUT KWS | TRANSFORMER |
|---|---|---|---|---|
| Dozzi | Edison (Orobia) | 30,000 KWS | | |
| S.Pietro D'Or | " " | 10,000 " | | |
| S.Pellegrindo | " " | 2,300 " | | |
| Locatello | " " | 850 " | | |
| Clanezzo I | " " | 400 " | | |
| Zogno | " (Edison) | 6,000 " | | |
| Semenza | " " | 3,600 " | | |
| Bertini | " " | 9,000 " | | |
| Esterle | " (Orobia) | 21,500 " | | |
| Trezzo | " " | 10,000 " | | |
| Bonato | " " | 5,050 " | | |
| Clanezzo B | " " | 2,800 " | | |
| Marne | " " | 5,200 " | | |
| Temu | " (Edison) | 32,000 " | | |
| Sonico | " " | 60,000 " | | |
| Forno | " " | 7,000 " | | |
| Paisco | " " | 5,500 " | | |
| Cedegolo D | " (Bresciana) | 7,000 " | | |
| Cedegolo E | " (Edison) | 34,000 " | | |
| Povo | " (Bresciana) | 3,200 " | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

## POWER PLANTS LOMBARDIA REGION

| IETY | INSTALLED CAPACITY | OUTPUT KWS | TRANSFORMERS | HYDRO THERMAL |
|---|---|---|---|---|
| (Orobia) | 30,000 KWS | | 583 | Hydro |
| " | 10,000 " | | | " |
| " | 2,300 " | | | " |
| " | 850 " | | | " |
| " | 400 " | | | " |
| (Edison) | 6,000 " | | | " |
| " | 3,600 " | | | " |
| " | 9,000 " | | | " |
| robia) | 21,500 " | | | " |
| " | 10,000 " | | | " |
| " | 5,050 " | | | " |
| " | 2,800 " | | | " |
| " | 5,200 " | | | " |
| dison) | 32,000 " | | | " |
| " | 60,000 " | | | " |
| " | 7,000 " | | | " |
| " | 5,500 " | | | " |
| resciana) | 7,000 " | | | " |
| dison) | 34,000 " | | | " |
| resciana) | 3,200 " | | | " |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| PLANT | SOCIETY | INSTALLED CAPACITY | OUTPUT KWS. | TRANSFORME |
|---|---|---|---|---|
| Valbona | Edison (Bresciana) | 3,070 KWS. | | |
| Mazunno | " " | 2,200 " | | |
| Salarno | " " | 4,500 " | | |
| Campellio | " (Edison) | 6,000 " | | |
| Izola | " " | 47,000 " | | |
| Ceto | " (Bresciana) | 5,200 " | | |
| San Bernardo | " (Edison) | 36,000 " | | |
| San Francesco | " " | 110,000 " | | |
| Gravedona | " (Comacina) | | " | |
| Cremia | " " | 300 " | | |
| San Pietro Sev. | " " | 3,000 " | | |
| Brescia | " " | 480 " | | |
| Maccagno | " (Prealpina) | 4,100 " | | |
| Creva | " " | 9,600 " | | |
| Ferrera | " " | 600 " | | |
| Talamona | " (Comacina) | 7,700 " | | |
| Rogoledo | " (Orobia) | 27,250 " | | |
| Pedezina | " " | 9,200 " | | |
| Gerala | " " | 12,250 " | | |
| Trona | " " | 820 " | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Y | INSTALLED CAPACITY | OUTPUT KWS. | TRANSFORMERS | HYDRO THERMAL |
|---|---|---|---|---|
| Bresciana) | 3,070 KWS. | | 583 | HYDRO |
| " | 2,200 " | | | " |
| " | 4,500 " | | | " |
| Edison) | 6,000 " | | | " |
| " | 47,000 " | | | " |
| Bresciana) | 5,200 " | | | " |
| Edison) | 36,000 " | | | " |
| " | 110,000 " | | | " |
| Comacina) | " | | | " |
| " | 300 " | | | " |
| " | 3,000 " | | | " |
| " | 480 " | | | " |
| Prealpina) | 4,100 " | | | " |
| " | 9,600 " | | | " |
| " | 600 " | | | " |
| Comacina) | 7,700 " | | | " |
| Orobia) | 27,250 " | | | " |
| " | 9,200 " | | | " |
| " | 12,250 " | | | " |
| " | 820 " | | | " |

Declassified E.O. 12356 Section 3.3/NND No. 785019



583

| PLANT | SOCIETY | INSTALLED CAPACITY | OUTPUT KWS. | TRANSFORM |
|---|---|---|---|---|
| Bonimi | Edison (Orobia) | 13,500 KWS. | | |
| Bellano | " " | 2,500 " | | |
| Premana | " " | 1,400 " | | |
| Troggia | " " | 300 " | | |
| Fornetto | " " | 500 " | | |
| Forcola | " " | 675 " | | |
| Serrati | " " | 1,200 " | | |
| Roncaglia | " " | 1,200 " | | |
| Cividate | " (Edison) | 40,000 " | | |
| Gratacazolio | " (Bresciana) | 950 " | | |
| Tagliuno | " " | 1,950 " | | |
| Degnoho | " " | 900 " | | |
| Mura | " " | 950 " | | |
| Barghe | " " | 520 " | | |
| Sabbro | " " | 300 " | | |
| Vobarno | " " | 20,000 " | | |
| Brasa | " " | 4,250 " | | |
| Cevoli | " " | 900 " | | |
| Volta Man. | " " | 30,000 " | | |
| San Zenone | " (Esticino) | 2,200 " | | |
| S.Angelo | " " | 800 " | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019



583

| ETY | INSTALLED CAPACITY | OUTPUT KWS. | TRANSFORMERS | HYDRO THERMAL |
|---|---|---|---|---|
| Orobia) | 13,500 KWS. | | | HYDRO |
| " | 2,500 " | | | " |
| " | 1,400 " | | | " |
| " | 300 " | | | " |
| " | 500 " | | | " |
| " | 675 " | | | " |
| " | 1,200 " | | | " |
| " | 1,200 " | | | " |
| Edison) | 40,000 " | | | " |
| Bresciana) | 950 " | | | " |
| " | 1,950 " | | | " |
| " | 900 " | | | " |
| " | 950 " | | | " |
| " | 520 " | | | " |
| " | 300 " | | | " |
| " | 20,000 " | | | " |
| " | 4,250 " | | | " |
| " | 900 " | | | " |
| " | 30,000 " | | | " |
| Svizzera) | 2,200 " | | | " |
| " | 800 " | | | " |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| PLANT | SOCIETY | INSTALLED CAPACITY | OUTPUT KWS. | TRANSFORME |
|---|---|---|---|---|
| Porta Volta | Edison (Est Ticino) | 11,000 KWS. | | |
| Brescia | " (Bresciana) | 5,000 " | | |
| Vigevano | " (Edison) | 4,500 " | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| | INSTALLED CAPACITY | OUTPUT KWS. | TRANSFORMERS | HYDRO THERMAL |
|---|---|---|---|---|
| Est Ticino) | 11,000 KWS. | | | Thermal |
| Bresciana) | 5,000 " | | | " |
| Edison) | 4,500 " | | | Hydro |

Declassified E.O. 12356 Section 3.3/NND No. 785019

5837

## POWER PLANTS LOMBARDIA REGION

| PLANTS | SOCIETY | INSTALLED CAPACITY | OUTPUT KWS | T |
|---|---|---|---|---|
| Poschiavino | Vozzola (Lombardia) | 9.600 KWS | | |
| Mallero | " " | 28.400 " | | |
| Masino | " " | 10.500 " | | |
| Carono | " " | 22.000 " | | |
| Bordogna | " " | 32.000 " | | |
| Vizzola | " " | 32.000 " | | |
| Tornavento | " " | 6.000 " | | |
| Turbigo | " " | 5.900 " | | |
| Turbigo | " " | 18.000 " | | |
| Castellanza | " " | 20.000 " | | |
| Fraele | Milano (Municipale) | 45.000 " | | |
| Roasco | " " | 32.000 " | | |
| Grossotto | " " | 20.000 " | | |
| Stazzone | " " | 32.000 " | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

## POWER PLANTS LOMBARDIA REGION

583

| SOCIETY | INSTALLED CAPACITY | OUTPUT KWS | TRASFORMERS | HYDRO THERMAL |
|---|---|---|---|---|
| la (Lombardia) | 9.600 KWS | | | Hydro |
| " | 28.400 " | | | " |
| " | 10.500 " | | | " |
| " | 22.000 " | | | " |
| " | 32.000 " | | | " |
| " | 32.000 " | | | " |
| " | 6.000 " | | | " |
| " | 5.900 " | | | " |
| " | 18.000 " | | | Thermal (coal) |
| " | 20.000 " | | | Thermal (oil) |
| no (Municipale) | 45.000 " | | | Hydro |
| " | 32.000 " | | | " |
| " | 20.000 " | | | " |
| " | 32.000 " | | | " |

05091

Declassified E.O. 12356 Section 3.3/NND No. 785019

Original - 1752
Copy pencil, 187

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION
APO 394

44

RECEIVED
P.W. & U. S/S A.C.
25 MAY 1945 197

6 Via Cerretani, Florence
Telephone No. 1153
May 23rd 1945

R

SUBJECT: Transmission lines.

TO : Lt-Col. Lapper
Public Works & Utilities Sub-Commission
Headquarters A.C. APO 394

1. Attached is copy of letter written by Major F.G. Green at the request of Capt. Forster in charge of mine clearance Tosca-na Region.

2. Confirming conversation to-day, it will be necessary to have two additional jeeps temporarily attached to this headquarter for the use of Major Crowther and Captain Duran to permit them to perform their assigned duties.

3. The transmission lines work now arranged will require the use of three 2½ ton military trucks for a period of one month.

4. After discussing the transportation problem with Ing. Landucci, he stated that his Company is prepared to purchase outright from military sources ten 1½ ton, three 3 ton, four 5 ton, 4 jeeps, one 30 ton trailer and prime mover, one dump truck, one truck crane with orange peel or clam shell bucket. 583/4

5. At the completion of transmission lines from Edison to Valdarno systems, it will be necessary to patrol these lines for proper maintenance and for this reason the above weapons carriers will be required.

6. A supply of 10 600 x 16 or Jeep size tires are urgently required to maintain present transport.

7. Fuel for flame throwers on mine clearance work is no longer available in this area; if it is possible for Major Price to arrange same with "Centro Chimico Militare" in Rome, transportation to Gallicano should be provided.

E.J. BARRY
Major C.E.
O.I.C.

Copy to Lt-Col. Renton
Major Price
File

1 enclosure

Declassified E.O. 12356 Section 3.3/NND No. 785019

# INCOMING MESSAGE

HEADQUARTERS ALLIED COMMISSION

Operator's Reference: 1028
Date/Time of Origin: MAY 22

Message Centre No: E/2279
Date Time Rec'd MAY 251010
Precedence: ROUTINE

FROM: LOMBARDIA REGION FOR POLETTI SIGNED PARKER

TO: ALLIED COMMISSION ROME ACPWU (ATT LT COL LAPPER)

43

# RESTRICTED

RESTRICTED.

1. Received your cable regarding importance of work re BOLOGNA and FLORENCE and suggested assignment of personnel.

2. I have considerable additional information on electricity situation and supply in North ITALY. Will arrive in ROME by plane Wednesday 23 May for further discussion of entire subject.

ACTION

DIST

ACTION - P WORKS S/C
INFO - A/PRESIDENT
CHIEF COMMISSIONER
ECON SEC
FILE 2
FLOAT

RECEIVED
P.W. & U. S/C A.C.
25 MAY 1945 147

HEADQUARTERS
5829
U.S.

# RESTRICTED

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.489081
Ext.317

WML/ce

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

22 May 45.

197/PWU.

SUBJECT : Società Meridionale di Elettricità, Naples.

TO : Commissioner AMG, Naples Commune.

42

1. An inspection has been made of the electrical facilities in Northern Italy and certain information obtained in connection with the repairs to the Pescara III Power Station.

2. Would you please be good enough to pass this information to Eng. Masturzo for his attention.

3. You will, I am sure, be interested to see from the note which I am sending to Masturzo that the conditions in Northern Italy, in so far as electricity is concerned, are excellent and we are now planning to pass some of this energy to Central and Southern Italy.

By command of Rear Admiral STONE:

49 refers

W.M. LAPPER,
Lieut-Colonel,
Chief, Elec.Div.

0 5 1 21

Declassified E.O. 12356 Section 3.3/NND No. 785019

197/PWU.

HEADQUARTERS ALLIED COMMISSION
Public Works & Utilities Sub-Commission
APO 394.

SUBJECT: Visit to North Italy.

22 May 1 945.

41

Dear Eng. Masturzo,

I have pleasure in sending you herewith drawings for the Pescara III which I managed to obtain from RIVA during my visit to North Italy. Also attached is a letter from RIVA and a letter from Eng. Selmo of the S.I.P.

You will be interested to know that conditions in North Italy are very good. A number of smaller generating stations were damaged by patriots and some transmission lines require repair. Most of the work will be cleared up in about 1 month with the exception of a few small stations which are completely destroyed.

There is plenty of electricity and as soon as we can complete the repairs to the transmission system between Bologna and Florence, 100,000 KW. of electricity can be brought down to Central Italy. I hope this may be possible within two months.

Many people in the north asked after Eng. Censato, Maglione and yourself, and they are all very anxious to meet again and discuss the Italian electrical problems.

A meeting of the Central Italy Advisory Committee will be held next week and as we shall be discussing the question of energy from the north and frequency matters, I propose asking you to attend this meeting, I will inform you later regarding the time and date of the meeting.

Kind regards

Sincerely yours

Eng. Tullio MASTURZO,
Direttore Generale
"Società Meridionale di Elettricità",

Naples
Via P.E.Imbriani,42

Enclosures.

5827

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.489081
Ext.317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

WML/ce

197/PWU.

22 May 1945.

40

Subject : Edison Group.

To : Ministry of Public Works
( att. Eng. Asta )

1. During my visit to Northern Italy I was informed by the Electrical Company at Genova that the stations Le Mesce -3200 KW.-, S.Dalmazzo - 35,000 KW.- and Confine - 8,400 KW- had been taken over by the French being isolated from their normal system. The company had no telephonic communication with their staff at these stations.

2. Attached is a copy of order of requisition which the French have given to the Electrical Company.

3. This is passed to you for information and record purposes, but it is hoped that the matter will be satisfactorily settled in the near future.

W.M. LAPPER,
Lieut-Colonel,
Chief, Elec. Div.

encl.: 1 copy.

5825

Declassified E.O. 12356 Section 3.3/NND No. 785019

FORCES FRANCAISES LIBRES
I^er Division

ORDRE DE REQUISITION

Brel

I - L'usine électrique de S.Dalmazzo Tenda fournira l'énergie électrique à haute tension :

1° - A l'Usine de Fontan de propriété de la Société Energie Electrique du Littoral Méditerranéen (E.E.L.M.) pour l'alimentation des communes de Fontan e Saorge;

2° - A Breil, à la Société "Energie Industrielle" pour l'alimentation générale de son reseau haute tension.

II - L'usine électrique de S.Dalmazzo Tenda prendra toute disposition pour reparer dans le moindre délai :

1) une ligne H.T. de S.Dalmazzo à Fontan

2) une ligne H.T. de S.Dalmazzo à Breil

III - Les modifications aux installations électriques de l'usine de S.Dalmazzo qui pourraient être necessaires pour la fourniture à 35 kV destinée a " L'Energie Industrielle" seront effectuées par le personel de S.Dalmazzo.

IV - Le reseau de " L'Energie Industrielle" sera raccordé à Breil, par le soin de cette Société, à la ligne S.Dalmazzo - Breil qui fait l'objet du paragraphe II/2 ci-dessus .

P.C. 2/5-45

F.to Général Garbay
Commandant I^re D.F.L.

5825

NOTA : La Centrale di S.Dalmazzo di Tenda è di proprietà della Società Italiana " Compagnia Imprese Elettriche Liguri (CIELI)" con sede in Genova (Viale Brigate Bisagno,1) . - Tale Centrale è nel Comune italiano di Tenda il quale fa parte della Provincia di Cuneo.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.489081
Ext.317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

WML/ce

39

197/PWU.

22 May 1945.

SUBJECT: Financial SIP.

TO : Ministry of Public Works
(att. Eng. Asta)

1. During my visit to Turin Eng. Selmo spoke to me regarding re-payment of money borrowed from America,

2. Attached is a statement showing the re-payments made by SIP. to the Italian Government, and Eng. Selmo is very anxious to know whether the money was actually paid over to America.

3. Will you be good enough to let me have a reply at an early date, so that Eng. Selmo may be informed.

W.M. LAPPER,
Lieut-Colonel,
Chief, Elec.Div.

encl.

50 copies

5824

0516

Declassified E.O. 12356 Section 3.3/NND No. 785019

Prestito obbligazionario estero SIP - 1930 = 4,50 %

Serie A - dollari - cambio 19.076923 = Doll. 10 milioni

| | | | |
|---|---|---|---|
| Liteas. 1.9.40 | Doll. | 6.161.000 | £ 117.532.922.60 |
| Ammort. capitale | " | 2.129.945.72 | " 40.632.810.49 |
| Liteas. 30.IV.945 | Doll. | 4.031.054.28 | £ 76.900.112.11 |

Serie B - franchi svizzeri - cambio 437 = fior. 25 milioni

| | | | |
|---|---|---|---|
| Liteas. 1.9.40 | Fior. | 17.441.000 | £ 76.217.170.- |
| Ammort. capit. | " | 4.556.449.24 | " 19.911.683.17 |
| Liteas. 30.IV.945 | Fior. | 12.884.550.76 | £ 56.305.486.83 |

Prestito obbligazionario ex Lanes 7% = 1930 =

Dollari 5 milioni Cambio 19.964645

| | | | |
|---|---|---|---|
| Liteas. 1.V.1940 | Doll. | 2.110.000 | £ 37.905.401.10 |
| Ammortam. cap. | " | 1.593.119.40 | " 28.619.824.46 |
| | Doll. | 516.880.60 | £ 9.285.576.64 |

Prestito Pubblica Utilità 1926 - 7%

Fono 20 milioni di dollari di cui 11.170.000 SIP =

cambio garantito £ 24.884

| | | | |
|---|---|---|---|
| Liteas. al 1.VII.940 | Doll. | 5.264.532.70 | £ 131.002.631.70 |
| Ammortamento capit. | " | 3.408.042.43 | " 84.805.787.83 |
| Liteas. al 1.V.945 | £ | 1.856.490.27 | £ 46.196.903.87 |

05171

Declassified E.O. 12356 Section 3.3/NND No. 785019

3A 107

TRANSLATION

SOCIETA' ELETTRICA DELLA SICILIA

Ref. 2478

30 April 1945

38

Subject : Material ordered to North Italy Firms

To : Lt.Col. W.M.LAPPER

Following information already supplied we beg to send you a list of materials and machinery already ordered to North Italy Firms and supposed to be ready for shipping on June 1943.

The availability of that material, particulary list 1 and 2, would permit and effective increase of putput at Porto Empedocle.

We are waiting for your kind reply as to the availability of the material and its shipping to Sicily.

SOC. ELETTRICA SICILIA

0 5 1 8 1

Declassified E.O. 12356 Section 3.3/NND No. 785019

SOCIETA' ELETTRICA DELLA SICILIA

Translation

Reference 2477
Subject : Material for steam plants
To : Lt.Col. Lapper

30 April 1945

1. Dalmine Firm at Dalmine (Bergamo) and Franco Tosi Firm (Legnano) have always been our dealers for steam plant material.

2. We think that both firms are in a position to supply or prepare all material included in the two following lists; this would be extremely useful for the maintenance of our steam plants.

3. Owing to present day difficulty to contact directly these Firms, we would be very grateful to you if you could inform us as to the possibility of supplying the material.

4. The attached list could be forwarded to the Firms and our Company will engage itself to the corresponding payment.

SOC. ELETTRICA DELLA SICILIA

5821

Declassified E.O. 12356 Section 3.3/NND No. 785019

SOCIETA' ELETTRICA DELLA SICILIA

Translation

To : Società Anonima Franco Tosi - Legnano

for Catania Steam Station

| Quantity | M a t e r i a l |
|---|---|
| 250 | Special cast iron ribs elements for economiser - similar to those mounted on Tosi Boilers (see contract 24 October 1940) registered at Legnano N° 558 - Volume 15 - Private Acts) |
| 300 | 180° curves in special cast iron - for the connection of above elements. |
| 6.000 | Bolts and nuts 3/4" - length 100 millimeters For Tosi Turbine (6,000 KW N° 1784 - 1936 built) : |
| | a) Spare blading for high pressure section (mobile and guide blades) |
| | b) - Main steam valve for turbine |
| | c) - Auxiliary pump for oil circulation (complete) for small steam turbine. |
| | d) - Spare unfellers for circulating pumps of condenser |
| | For Tosi turbine (12000 KW N° 2368 - 1940 order N° 251 March 21st 1939). |
| | a) - spare impellers for circulating pump of condenser |
| | b) - Muntz metal plates for condenser : outside diameter 3500 mm. thickness 30 mm. |

5821

0 5 2 0 1

Declassified E.O. 12356 Section 3.3/NND No. 785019

Translation

SOCIETA ELETTRICA DELLA SICILIA

To : DALMINE S.A. - DALMINE (Bergamo)

| Quantity | Materials | |
|---|---|---|
| | CATANIA STATION | |
| 750 | Boiler tubes for soft steel boiler : | |
| | outside diameter | 102 mm. |
| | inside " | 92 mm. |
| | length " | 4910 mm. |
| 300 | do length | 5180 mm. |
| 100 | do " | 6000 mm. |
| 20 | do outside diameter | 80 mm. |
| | inside " | 68 mm. |
| | length | 5000 mm. |
| 600 | Chromum-molybdenum steel tubes for superheater : | |
| | outside diameter | 38 mm. |
| | inside " | 32 mm. |
| | length | 6 meters |
| 600 | Boiler tubes for soft steel boiler : | |
| | outside diameter | 102 mm. |
| | inside diameter | 92 mm. |
| | length | 5185 mm. |
| 400 | do length | 5500 mm. |
| 400 | Special steel tubes for superheater : | |
| | outside diameter | 38 mm. |
| | inside diameter | 32 mm. |
| | length | 8150 mm. |
| 300 | do length | 5000 mm. |
| | For PORTO EMPEDOCLE STEAM STATION | |
| 200 | Special steel tubes for superheater | |
| | outside diameter | 38 mm. |
| | inside diameter | 30 mm. |
| | length | 6000 mm. |

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Declassified E.O. 12356 Section 3.3/NND No. 785019



| Quantity | Materials | |
|---|---|---|
| 150 | Soft steel tubes : | |
| | outside diameter | 32 mm. |
| | inside " | 26 mm. |
| | length | 6000 mm. |

REMARKS

Superheater tubes must be designed for high temperature operation (particularly at Porto Empedocle where superheated steam is at 435° C.).

052 21

Declassified E.O. 12356 Section 3.3/NND No. 785019

SOCIETA' ELETTRICA DELLA SICILIA

MATERIAL ALREADY ORDERED IN NORTHERN ITALY

1.) - ANSALDO WORKS - Genova

10.000 KW turbogenerator for Porto Empedocle (ordered on January 11th 1942 and supposed to be ready in June 1943).

2) - BROWN-BOVERI Baden (through Teonomasio Brown Boveri - Pinzzale Lodi 3 MILANO

Spare parts for Porto Empedocle turbogenerator (according to letter on September 1° 1943, this material was already in Italy at Corbetta (Milano) ready for shipping to Sicily

3) - Eng. MARIO GONZALES di ZENETE - Viale Regina Margherita 45 - Milano

Screens for Porto Empedocle boilers (according to information in May 1943, this material was almost ready.

4) - FORNI STEIN - GENOVA

Stokers for Porto Empedocle boilers
(this order was connected to n° 3 order and was followed by Eng. Gonzales).

Declassified E.O. 12356 Section 3.3/NND No. 785019

37

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
LIGURIA REGION
APO 394

RECEIVED
P.W. & U. S/C A.C.
23 MAY 1945 197

OFFICE OF REGIONAL ENGINEER

19 May 1945

Subject. Report from Ansaldo plant, Genova.

To. Public works and utilities sub-Commission.

1.) Submitted here with is report of electrical equipment on order with Ansaldo works Genoa.

2.) Also find report of miscellanedus equipment on order.

3.) Similar report from San Giorgio plant to follow.

ELMO E. PARKER
Capt. Inf.
P.W.& U. Officer

ANSALDO

ANSALDO ENGINEERING WORKS

18th May 1945

LIST OF THE MAIN WORKS BEING CARRIED OUT
IN CENTRAL AND SOUTHERN ITALY.

---

Soc. ELETTRICA SARDA - Rome. N° 2-22.500 kVA transformers 120.000/74.000 - 50 cycles natural cooling - for the Villasor substation. The first unit was requisitioned by the Germans and sent to Germany. This unit requires all materials for its reconstruction. The 2nd unit which has also been requisitioned is in our shop for finish working, so far it is by 60% finished. Most of the materials are on hand.

AZIENDA GOVERNATORIALE ELETTRICIT&' ED ACQUE - ROME - N° 1 generator 25.000 kVA - 9.000 Volt - 2.700 r.p.m. 45 cycles for the Steam Power plant in Rome. The materials are ready for assembling in the power plant.

LARDERELLO S.A. PER LO SFRUTTAMENTO DELLE FORZE ENDOGENE - FLORENZ.

1) N°4 generators 30.000 kVA - 10.5000 V. - 3.000 r.p.m. 50 cycles for the Larderello power plant.
Average percentage of carried out work: 40%
Large part of the materials is on hand.
2) N°2 three-phase transformers 6.000 kVA - 10.500/4.500 V. - 50 cycles, natural cooling - for feeding the auxiliary services of the power plant for the 30.000 kVA set.
Percentage of carried out works: 75%
Large part of the materials is on hand.
3) generator repair: 930 kVA
Percentage of carried out works: 10%

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Soc. ELETTRICA SARDA - Rome. N° 2-22.500 kVA transformers 120.000/74.000 - 50 cycles natural cooling - for the Villasor substation. The first unit was requisitioned by the Germans and sent to Germany. This unit requires all materials for its reconstruction. The 2nd unit which has also been requisitioned is in our shop for finish working, so far it is by 60% finished. Most of the materials are on hand.

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Average percentage of carried out work: 40%
Large part of the materials is on hand.

2) N°2 three-phase transformers 6.000 kVA - 10.500/4.500 V. - 50 cycles, natural cooling - for feeding the auxiliary services of the power plant for the 30.000 kVA set.
Percentage of carried out works: 75%
Large part of the materials is on hand.

3) generator repair: 930 kVA
Percentage of carried out works: 10%
Small part of the materials is on hand.

5815

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Declassified E.O. 12356 Section 3.3/NND No. 785019

4) - Reserve parts of exciting machines for generators of 15.000 kVA already furnished.
Percentage of carried out work: 0%
No material on hand so far.
5) - N°1 generator 4750 kVA - 4500 Volt - 3000 r.p.m. - 50 cycles, destined to the power plant of Sasso Pisano.

SOC. GENERALE ELETTRICA DELLA SICILIA - PALERMO N°1 couple of generators destined to the construction of a Ljungstrom generating set - 14.300 kVA - 9000/11000 Volt - 3000 r.p.m. - 50 cycles destined to the steam power plant of Porto Empedocle.
Percentage of carried out works: 60%
Large part of the material is on hand.

SOC. TERNI - GENOVA - N°1 generator 60.000 kVA - 12.500 Volt - 315/375 r.p.m. - 42/50 cycles, destined to the power plant of S. Giacomo al Vomero (Terni).
Some parts of the generator have already been forwarded in due time to the power plant.
The remnant parts are ready to be forwarded for assemblage on the site.
Most of the materials are on hand.

ENTE AUTONOMO DEL VOLTURNO - NAPOLI - N°4 transformers 100 kVA and N°3 75 kVA - 500/270-260-250 Volt - 44 ± 2 cycles.
Percentage of carried out works: 40%
Part of the materials is on hand.

AZIENDA AUTOFILOTRANVIARIA - NAPOLI - N° 8 transformers for rectifiers (1500 kW - 600 Volt c.c.) - 2085 kVA - 8825 ± 5% Volt primary - 45 cycles with controlling coils and anodic partitioners destined to the substations of the Naples trolley-busways.
Percentage of carried out works: 20%
Largepart of the materials is on hand.



Declassified E.O. 12356 Section 3.3/NND No. 785019

cycles, destined to the power plant of Sasso Pisano.

SOC. GENERALE ELETTRICA DELLA SICILIA - PALERMO N°1 couple of generators destined to the construction of a Ljungstrom generating set - 14.300 kVA - 9000/11000 Volt - 3000 r.p.m. - 50 cycles destined to the steam power plant of Porto Empedocle.
Percentage of carried out works: 60%
Large part of the material is on hand.

SOC. TERNI - GENOVA - N°1 generator 60.000 kVA - 12.500 Volt - 315/375 r.p.m. - 42/50 cycles, destined to the power plant of S. Giacomo al Vomero (Terni).
Some parts of the generator have already been forwarded in due time to the power plant.
The remnant parts are ready to be forwarded for assemblage on the site.
Most of the materials are on hand.

ENTE AUTONOMO DEL VOLTURNO - NAPOLI - N°4 transformers 100 kVA and N°3 75 kVA - 500/270-260-250 Volt - 44 ± 2 cycles.
Percentage of carried out works: 40%
Part of the materials is on hand.

AZIENDA AUTOFILOTRANVIARIA - NAPOLI - N° 8 transformers for rectifiers (1500 kW - 600 Volt c.c.) - 2085 kVA - 8825 ± 5% Volt primary - 45 cycles with controlling coils and anodic partitioners destined to the substations of the Naples trolley-busways.
Percentage of carried out works: 20%
Large part of the materials is on hand.

581



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AZIENDA AUTOFILOTRANVIARIA - NAPOLI - N° 20 electric equipments for trolley-busses with 135 H.P. traction motors.
N°2 complete equipments delivered to customer in due time.
Out of the remaining 18 equipments the situation is the following:
N°14 requisitioned by the germans.
N° 4 given over for the Azienda Comunale Navigazione Interna Lagunare Venezia.
Materials for the reconstruction: none
Percentage of carried out works: 0 %

SOCIETA' ANONIMA SICILIANA TRASPORTI - PALERMO - N° 9 153 HP traction motors - 1 reserve armature for the trolley-busses.
Percentage of carried out works: 70 %
Large part of the materials is on hand.

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Out of the remaining 18 equipents the situation is the following:

N°14 requisitioned by the germans.

N° 4 given over for the Azienda Comunale Navigazione Interna Lagunare Venezia.

Materials for the reconstruction: none

Percentage of carried out works: 0 %

SOCIETA' ANONIMA SICILIANA TRASPORTI - PALERMO - N° 9 153 HP traction motors - 1 reserve armature for the trolley-busses.

Percentage of carried out works: 70 %

Large part of the materials is on hand.

5813



Declassified E.O. 12356 Section 3.3/NND No. 785019

ANSALDO

Genova-Cornigliano, 18th May 1945

Statement concerning the orders on hand for supplies to customers in Central and Southern Italy.

Order N° 2526 - Customer: Industria Meridionale Azoto e Derivati.

N° 3 Water gasometers to be assembled at Naples. The materials have all been despatched. Assemblage has been suspended owing to the war.

Order N° 1635 - Customer: Impresa Allegri Rome, Via Ovidio, 26

Magliana Bridge.
Workshop work partly carried out - Assemblage has not been started owing to the war.

Order N° 21023 - Soc. Terni of Terni

N° 1 tank for a carbide oven, A good part of the workshop work has been carried out. Assemblage not started owing to the war.

Order N° 21025 - Società Napolitana Gas - Naples.

Repair of a 80.000 cm. gasometer. Work has been partly carried out owing to the war. All respective tools and implements have been left back on the working yard.

Order N° 6454/57 - Soc. Elettr. della Sicilia - Palermo.

N°1 Turbogenerating set 10.000 Kw. About 15% of ferrous materials, i.e. about 20.000 Kg is not on hand; this figure includes the enclosing hoods and other materials ordered in Germany and to be ordered in Italy again.

Order N° 5918/19 - Soc. Gomma Sintetica - Terni.

N° 1 Turbogenerating set 4.000 Kw. The enclosing hoods have been ordered in Germany; as they have not been received they have to be ordered again in Italy.

Order NO 6613 - Soc. Gomma Sintetica - Terni

N° 5 steam accumulator locomotives. The 97% of the material is on hand. 8500 Kg of ferrous materials and 140 Kg of special materials are still wanted.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Statement concerning the orders on hand for supplies to customers in Central and Southern Italy.

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Order NO 6613 - Soc. Gomma Sintetica - Terni

N° 5 steam accumulator locomotives. The 97% of the material is on hand. 8500 Kg of ferrous materials and 140 Kg of special materials are still wanted.

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Order N°8346/50 - Forino e Figli - Nocera inferiore.

NO 1 Water tube boiler. All required materials viz.:
44.000 Kg of ferrous materials and 20 Kg of special materials are wanted.

Order N° 5431/37 - Orsi Mangelli - Forlì.

N° 1 Water tube boiler. All required materials have been partly dispatched to Forlì and partly will be ready for shipping in June 1945.

P.S. Order N° 21035 - Italian State Railways - Bologna.

N° 3 railway bridges for the Bologna - Verona lines. Steps have been taken to purchase the materials. No works have been carried out.
We think such works to be still useful for the Italian State Railways and there is good chance of resuming them.

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Order N° 3431/37 - Orsi Mangelli - Forlì.

N° 1 Water tube boiler. All required materials have been partly dispatched to Forlì and partly will be ready for shipping in June 1945.

P.S. Order N° 21035 - Italian State Railways - Bologna.

N° 3 railway bridges for the Bologna - Verona lines. Steps have been taken to purchase the materials. No works have been carried out.
We think such works to be still useful for the Italian State Railways and there is good chance of resuming them.

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05341

Declassified E.O. 12356 Section 3.3/NND No. 785019

LINEA 50 KV. VLASKA - POLA DI PROPRIETA' DELLA SOCIETA' ELETTRICA

DELLA VENEZIA GIULIA - TRIESTE -

RECEIVED
P.W. & O. [illegible]
22 MAY 1945 197

36

CARATTERISTICHE ELETTRICHE

Linea trifase a 50.000 Volt. - 42 periodi

potenza convogliabile I5200 KW.

CARATTERISTICHE MECCANICHE

a) Lunghezza della linea Km. 28,7

b) Conduttori, nº 3 in corda composta di alluminio-acciaio sezione complessiva di I04,9 mmq. corrispondente a 30 fili di alluminio e 7 di acciaio del diametro di mm. I,9. Diametro totale I3,3 mm. Sollecitazione max: 11 Kg/mmq. tenendo come ipotesi base quella prevista dalle norme e cioè:

A 0º manicotto ghiaccio di I2 mm. di spessore radiale e vento a 65 Km/ora.

a - 5º vento a I40 Km./ora

c) campata media: metri I50

Sostegni: in acciaio e conduttori disposti orizzontalmente.

Quattro sono i tipi: il tipo normale, il tipo per angolo di I5º, il tipo per angolo di 30º ed il tipo di ancoraggio completo ed attraversamento ferroviario.

d) Freccia max: metri 3,60

Isolatori ; tipo di isolatore a catena con 5 elementi in sospensione e 6 in amarro.

e) Morsetteria: Data la zona soggetta a venti è stato posto in opera il peduncolo da 25 cm. ed è stato adottato il corno di protezione.

Venezia, I7 Maggio I945

I have accompanying Map R 2515

5819

Declassified E.O. 12356 Section 3.3/NND No. 785019

## 50 K.V. LINE VLASKA TO POLA

Belongs to the SELVEG Soc.Elet.Venezia Giulia (subsid.to SADE)
3 phase 50 kv 42 Hz. carrying capacity 15,200 kw.

Lenght of the line km. 28,7
Wires: 3 ,stranded wires aluminum=steel,sq.mm. 104,9, 30 solid wires aluminum and 7 steel,diam.each mm. 1,9 ;total diam. 13.3 mm. Maxim load 11 kg./sq.mm. in the rules hipotesis:
0°,ice ring 12 mm. (radial) and wind 65 km/hour.
5° wind 140 km/hour
medium span 150 m.
towers:steel;wires horizontal
4 kind of towers;normal,angle 15°,angle 30°,raiway crossing or total anchorage.
Max arrow 3.60 m.
Insulators;suspension,5 normal and 6 in the anchorages.
Clamps and accessories;as the area is severely winded the big pins are used and the protection horn has been used

Venice May 17 1945

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P.W. & U. S/C A.C.
19 MAY 1945 197

ADVANCED SECTION
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB-COMMISSION
ALLIED COMMISSION

35

6 Via Corretani, Florence
Telephone nº 1153
May 12th 1945

SUBJECT: Transmission lines work in progress.

Ref. : A/1

TO : Lt-Col. Lapper
Electrical Division P.W. & U. S/C
H.Q. Allied Commission A.P.O. 394

Herewith information on transmission lines work in progress:

Tavarnuzze - Pontedera - 30 KV line - completed from Tavarnuzze as far as tower No. 115 (between Empoli and Santa Croce); another week is scheduled to complete the work.

Pescia - Pontedera - 30 KV line - line completed from Pescia as far as Altopascio; work suspended for lack of transportation.

Rifredi - Grizzana - 30 KV line - 5 gangs railway workers are working from Rifredi as far as Grizzana; the repair will be completed by May 20th.

Piano della Rocca - Ligonchio - 120 KV line - one gang Selt-Valdarno workers is working in the section Piano della Rocca - Gallicano; this section will be completed by May 15th. In the section Gallicano - Ligonchio (Edison property) 15 days work for one gang workers are scheduled to put the line in service. This work will start as soon as mines are cleared.

Piano della Rocca - Ligonchio - 2 circuits at 60 KV - one gang Selt-Valdarno is working in the section Piano della Rocca - Gallicano, and one gang Selt-Valdarno is working in the section Castelnuovo - Ligonchio; this two sections will be completed by May 15th. In the section Castelnuovo - Gallicano 15 days work for one gang workers are scheduled to put the line in service. Work will start as soon as mines are cleared.

Rehabilitation of Generating Plants:

Piano della Rocca - Second group 14,000 KVA ready to be in service as soon as water is available.

5808

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Lima - Second group. Casting will be completed by May 20th. Electric work will be completed by May 15th.

Third group: The scroll case is ready in Follonica I.L.V.A. plant. The turbine and shaft are ready in Castelnuovo plant; the alternator is ready in Florence. At present Selt-Valdarno have no transportation to carry the materials to Lima plant.

60/5 transformer is still under repair in Florence.

Ravacce - Building will be completed in three months. The turbine is completed at Cantini Works in Pistoia. The generator is still under repair.

Sperando - The building is completed; the roofing not yet completed. The turbine is ready; insulating material is lacking to repair the generator.

Laterina - The group is assembled and will be ready by May 20th.

ADVANCED SECTION
P.W.A.B.
SUB-COMM.
OFFICIAL
DATE
A. C.
ELECTRICAL DIVISION

E.J. Barry
Major C.E.
O.I.C.

Copy to Lt-Col. Renton

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P.W. & U. S/C A.C.
19 MAY 1945 197

P.W. & U. S/C

498

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ENGINEER SECTION (BR)
A.F.H.Q.
C.M.F.
Tele. No. Freedom 312

SUBJECT: Power Line - FLORENCE-BOLOGNA ENG/2005/1

TO : Engr HQ 5 Army (for ADV Br Incr) 17 May 45

Your letter V/129/13 dated 13 May 45 refers.

Proposed connection 120 KV line TOR MADDENE-PORJI to TREBNI-KEPAKDI line at crossing SOUTH of S.LAZZARO approved.

G.J.S. DIEUX,
Lt.-Colonel, R.E.,
for Brigadier,
Director of Works.

5806

Copy to: CE 15 Army Gp
HQ Allied Commission (attn: Lt-Col LAPPER)

Declassified E.O. 12356 Section 3.3/NND No. 785019

VENICE OFFICE
ELECTRICAL DIVISION
PUBLIC WORKS & UTILITIES SUB COM.
ALLIED COMMISSION
A P O 394

RECEIVED
P.W. & U. S/C A.C.
15 MAY 1945 197

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May 11th 1945

CSW/pp

SUBJECT: Initial Report on Adriatic Power Company

TO: Milan Office, Electrical Division, P.W.U. S.C. A.C.

1. In accordance with letter dated 4 May 1945, HQ Milan Office, subject: Rehabilitation of Electric Power Plants and Transmission Lines, the attached report is submitted.

2. The power supply in the Venezia Region is very satisfactory. The present load is approximately 100,000 kW., while the present capacity is nearly 250,000 kW. Repairs to damaged transmission lines will increase the available hydroelectric power to nearly 400,000 kW.

3. The main Venice steam plant at Mestre has an installed capacity of 55,000 kW. This plant was damaged and is now not in operation. It is contemplated that one 15,000 kW. unit will be ready for operation by the end of this month and that the entire plant will be available for operation in about three months.

4. As a whole the generating damage has been slight; the most urgently required work is the rehabilitation of transmission lines. Transformers are available in northern undamaged areas for installation in destroyed sub-stations in the southern areas.

5. Detailed reports of contemplated rehabilitation work will be submitted at a later date. It is contemplated that necessary repairs will be made within ten days to enable reconnection of the Piave-Ansiei and Cordevole groups. Repairs to the 50. kV. transmission line from Bologna to Ferrara were completed 10 May 1945.

Clarence S. Wilcox
Maj.ord.
Chief Venice Office

5805

Declassified E.O. 12356 Section 3.3/NND No. 785019

2.nd sheet

Venice, 11th May 1945

SUBJECT: Initial Report on Adriatic Power Company

TO: Milan Office, Electrical Division, P.W.U., S.C., A.C.

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Inclosures:

1. Hydroelectric plants
2. Steam plants
3. Report on Mestre Steam Plant
4. Report on transformers—
5. Directors of Adriatica Power Co.
6. Technical data on hydro plants
7. Status of transmission lines—
8. Map of areas served by Adriatic Co.
9. Transmission lines map.
10. Status of sub-stations

cc. to Lt.Col.Lapper
" " Maj. Knight (Ven. Reg.)

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Declassified E.O. 12356 Section 3.3/NND No. 785019

SOCIETA' ADRIATICA( )I ELETTRICITA'

HYDROELECTRIC PLANTS

| Gener. Plants | Capacity | | Daily generating capacity-with the actual stream flow | |
|---|---|---|---|---|
| | normal kW. | present kW. | normal kWh. | present kWh. |
| Cellina (Malnisio-Giais-Partidor) | 14.500 | 14.500 | 300.000 | 300.000 |
| Piave-S.Croce (Fadalto-Nove-S.Floriano-Castelletto-Caneva-Livenza) | 195.000 | 195.000 | 2.000.000 | 2.000.000 |
| Brentella (1) (Pederobba-Croce del Gallo-Caerano) | 5.000 | == | 100.000 | == |
| Piave Ansiei (2)(Peloa) | 30.000 | == | 450.000 | == |
| Cordevole (2) (Cencenighe-Agordo-Stanga) | 68.000 | == | 1.200.000 | == |
| Isonzo (3) (Doblari-Plava) | 46.500 | 4.000 | 800.000 | 90.000 |
| Cismon (4)(Pedesalto) | 6.500 | 4.000 | 160.000 | 100.000 |
| Bassano | 7.000 | 6.000 | 120.000 | 120.000 |
| Ledra (5) | 2.000 | == | == | == |
| Adige (Sorio I & II) | 12.000 | 12.000 | 220.000 | 220.000 |
| Minors (6) | 11.000 | 12.000 | 100.000 | 100.000 |
| Brasimone (7) (S.Maria-Le Piane) | == | == | == | == |
| Totals ..... | 397.500 | 247.500 | 5.450.000 | 2.930.000 |

(1) Not operating - canal damaged by bombing

(2) The Piave-Ansiei and Cordevole plants are not connected, due to damages on the 130 kV. line.

(3) The Doblari plant operates with one unit - at reduced load on the 10 kV. grid - the other units and the Plava units are not connected, due to damages on the 130 and 50 kV. lines.

(4) One unit not in use due to maintenance.

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Adriatica hydroelectric plants

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(5) Not operating - due to electrical damage to the generators

(6) Medipuglia - Aidussina - Dessedan - Acqua Nora - Vedronza - Resia and 31 small plants

(7) The plants were destroyed during German occupation.

Venice, May 7th 1945

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# VENICE PROVINCE THERMAL PLANTS

| Location | Co. operating | Generating capacity kW. |
|---|---|---|
| Venice-Marghera | S.A.D.E. Steam plant | 55.000 |
| " " | I.N.A. (Montecatini) Steam plant | 2.000 |
| " " | S.A.V.A. Steam plant | 4.000 |
| Venice | R.Navy Yard Steam plant | 600 |
| " | Junghans factory Steam plant | 500 |

Venice, May 9th 1945

5807

Inel 42

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SOCIETA' ADRIATICA DI ELETTRICITA' -VENICE

Transformers location : plants & substations

| Location | Indoor or outdoor | N.of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|---|
| Annexed to plants: | | | | | |
| FADALTO | Indoor | 3 | 22.000 | 6,3/65 | In operation |
| | | 2 | 22.000 | 6,3/130 | " " |
| | | 3 | 3.600 | 6/57 | " " |
| NOVE | Indoor & outdoor | 1 | 7.200 | 6/57 | " " |
| | | 1 | 10.000 | 6/57 | " " |
| | | 1 | 22.000 | 6/57 | " " |
| | | 2 | 22.000 | 6,3/130 | " " |
| | | 3 | 3.600 | 6/57 | " " |
| CASTELLETTO | Indoor | 1 | 10.000 | 12/65 | " " |
| CANEVA | Indoor | 1 | 16.500 | 6,3/65 | " " |
| | | 2 | 16.500 | 6,3/130 | " " |
| LIVENZA | Indoor | 2 | 3.500 | 6,3/65 | " " |
| MALNISIO | Indoor | 1 | 3.800 | 4,8/62 | " " |
| | | 1 | 6.000 | 4,8/36 | " " |
| GIAIS | Indoor | 2 | 3.800 | 4,8/62 | " " |
| | | 1 | 6.000 | 4,8/62 | " " |
| PARTIDOR | Indoor | 2 | 2.000 | 4,4/56 | " " |
| PEDEROBBA | Indoor | 1 | 3.500 | 6/57 | " " |
| | | 1 | 1.000 | 6/12 | " " |
| CROCE DEL GALLO | Indoor | 1 | 3.500 | 6/52 | " " |
| | | 1 | 2.000 | 6/12 | " " |
| | | 1 | 1.000 | 6/12 | " " |
| PEDESALTO | Indoor | 3 | 2.800 | 5/60 | " " |

5800

9 mal = 4

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CA DI
ENICE

## Transformers location : plants & substations

| | Indoor or outdoor | N.of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|---|
| nts: | | | | | |
| | Indoor | 3 | 22.000 | 6,3/65 | In operation |
| | | 2 | 22.000 | 6,3/130 | " " |
| | | 3 | 3.600 | 6/57 | " " |
| | Indoor & outdoor | 1 | 7.200 | 6/57 | " " |
| | | 1 | 10.000 | 6/57 | " " |
| | | 1 | 22.000 | 6/57 | " " |
| | | 2 | 22.000 | 6,3/130 | " " |
| | | 3 | 3.600 | 6/57 | " " |
| | Indoor | 1 | 10.000 | 12/65 | " " |
| | Indoor | 1 | 16.500 | 6,3/65 | " " |
| | | 2 | 16.500 | 6,3/130 | " " |
| | Indoor | 2 | 3.500 | 6,3/65 | " " |
| | Indoor | 1 | 3.800 | 4,8/62 | " " |
| | | 1 | 6.000 | 4,8/36 | " " |
| | Indoor | 2 | 3.800 | 4,8/62 | " " |
| | | 1 | 6.000 | 4,8/62 | " " |
| | Indoor | 2 | 2.000 | 4,4/55 | " " |
| | Indoor | 1 | 3.500 | 6/57 | " " |
| | | 1 | 1.000 | 6/12 | " " |
| LO | Indoor | 1 | 3.500 | 6/52 | " " |
| | | 1 | 2.000 | 6/12 | " " |
| | | 1 | 1.000 | 6/12 | " " |
| | Indoor | 3 | 2.800 | 5/60 | " " |

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| Location | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|---|
| SORIO | Indoor | 3 | 2.400 | 10/3,3 | In operation |
| | Indoor & outdoor | 1 | 3.000 | 10/3,3 | " " |
| | | 1 | 4.000 | 51/11 | " " |
| | | 1 | 5.100 | 63/11 | " " |
| | | 1 | 8.000 | 10/50 | " " |
| | | 3 | 15.000 | 125/56 | 2 in operation, 1 hid no re |
| PELOS | Indoor | 3 | 21.300 | 8,5/135 | In operation |
| SANTA MARIA | Indoor | 2 | 2.600 | 5/3 | Destroyed |
| | | 3 | 2.500 | 5/5 | Destroyed |
| LE PIANE | Indoor | 2 | 5.000 | 5/50 | Destroyed |
| CENCENIGHE | Indoor & outdoor | 2 | 15.000 | 10/135 | In operation |
| AGORDO | Indoor & outdoor | 2 | 15.000 | 10/135 | " " |
| STANGA | Indoor & outdoor | 2 | 17.500 | 10/135 | " " |
| DOBLARI | Indoor & outdoor | 3 | 15.000 | 10/130 | " " |
| PLAVA | Indoor & outdoor | 2 | 10.000 | 10/54 | " " |
| POWER STATION MARGHERA | Indoor & outdoor | 2 | 22.000 | 50/10 | 1 hidden, no report - maged, no report |
| | | 1 | 6.000 | 50/10 | damaged, under repair |
| | | 2 | 36.000 | 130/50/10 | 1 in operation - 1 d under repair |
| **Substations:** | | | | | |
| FIUME | Indoor | 2 | 8.000 | 50/10 | No report |
| MATTUGLIE | Indoor & outdoor | 3 | 12.000 | 130/50 | No report |
| POLA | Indoor | 3 | 2.000 | 50/10 | In operation |
| | | 2 | 6.000 | 50/10 | " " |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|
| Indoor | 3 | 2.400 | 10/3,3 | In operation |
| Indoor & outdoor | 1 | 3.000 | 10/3,3 | " " |
| | 1 | 4.000 | 51/11 | " " |
| | 1 | 5.100 | 63/11 | " " |
| | 1 | 8.000 | 10/50 | " " |
| | 3 | 15.000 | 125/56 | 2 in operation, 1 hidden - no report |
| Indoor | 3 | 21.300 | 8,5/135 | In operation |
| Indoor | 2 | 2.600 | 5/3 | Destroyed |
| | 3 | 2.500 | 5/5 | Destroyed |
| Indoor | 2 | 5.000 | 5/50 | Destroyed |
| Indoor & outdoor | 2 | 15.000 | 10/135 | In operation |
| Indoor & outdoor | 2 | 15.000 | 10/135 | " " |
| Indoor & outdoor | 2 | 17.500 | 10/135 | " " |
| Indoor & outdoor | 3 | 15.000 | 10/130 | " " |
| Indoor & outdoor | 2 | 10.000 | 10/54 | " " |
| Indoor & outdoor | 2 | 22.000 | 50/10 | 1 hidden, no report - 1 damaged, no report |
| | 1 | 6.000 | 50/10 | damaged, under repair |
| | 2 | 36.000 | 130/50/10 | 1 in operation - 1 damaged under repair |
| Indoor | 2 | 8.000 | 50/10 | No report |
| Indoor & outdoor | 3 | 12.000 | 130/50 | No report |
| Indoor | 3 | 2.000 | 50/10 | In operation |
| | 2 | 6.000 | 50/10 | " " |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Location | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|---|
| SAN VINCENTI | Indoor & outdoor | 1 | 1.000 | 50/10 | Destroyed |
| CAROIBA | Indoor | 2 | 1.000 | 50/10 | In operation |
| ROZZOL-TRIESTE | Indoor | 2 | 3.000 | 50/27 | In operation |
| | | 1 | 6.000 | 50/27 | " " |
| ROIANO(Trieste) | Indoor | 3 | 3.000 | 50/27 | " " |
| | | 1 | 6.000 | 50/27 | " " |
| OPICINA | Indoor & outdoor | 3 | 22.000 | 130/50 | " " |
| | | 2 | 1.500 | 50/10 | " " |
| MONFALCONE | Indoor | 2 | 2.500 | 50/10 | " " |
| GORIZIA | Indoor | 3 | 3.000 | 50/27 | " " |
| UDINE | Indoor | 2 | 2.000 | 50/20 | 1 destroyed - 1 in |
| | | 2 | 4.000 | 50/20 | 1 in operation - 1 |
| PORCIA | Indoor | 3 | 2.100 | 57/10 | 2 in operation, 1 h no |
| BUIE | Indoor | 2 | 1.000 | 25/10 | No report |
| PREVALLO | Indoor | 1 | 300 | 27/10 | No report |
| POSTUMIA | Indoor | 1 | 300 | 27/10 | No report |
| | | 1 | 100 | 27/10 | No report |
| SAN PIETRO DEL CARSO | Indoor | 2 | 500 | 27/110 | No report |
| SUMMAGA | Indoor | 1 | 100 | 33/10 | In operation |
| SALUTE | Indoor | 2 | 750 | 31/10 | 2 hidden, no report |
| | | 1 | 2.000 | 31/10 | 1 in operation |
| SAN DONA' DI PIAVE (2) | Indoor | 1 | 420 | 32/62 | In operation |
| | | 3 | 360 | 32/62 | In operation |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|
| Indoor & outdoor | 1 | 1.000 | 50/10 | Destroyed |
| Indoor | 2 | 1.000 | 50/10 | In operation |
| Indoor | 2 | 3.000 | 50/27 | In operation |
| | 1 | 6.000 | 50/27 | " " |
| Indoor | 3 | 3.000 | 50/27 | " " |
| | 1 | 6.000 | 50/27 | " " |
| Indoor & outdoor | 3 | 22.000 | 130/50 | " " |
| | 2 | 1.500 | 50/10 | " " |
| Indoor | 2 | 2.500 | 50/10 | " " |
| Indoor | 3 | 3.000 | 50/27 | " " |
| Indoor | 2 | 2.000 | 50/20 | 1 destroyed - 1 in operation |
| | 2 | 4.000 | 50/20 | 1 in operation - 1 hidden n.r. |
| Indoor | 3 | 2.100 | 57/10 | 2 in operation, 1 hidden - no report |
| Indoor | 2 | 1.000 | 25/10 | No report |
| Indoor | 1 | 300 | 27/10 | No report |
| Indoor | 1 | 300 | 27/10 | No report |
| | 1 | 100 | 27/10 | No report |
| Indoor | 2 | 500 | 27/110 | No report |
| Indoor | 1 | 100 | 33/10 | In operation |
| Indoor | 2 | 750 | 31/10 | 2 hidden, no report |
| | 1 | 2.000 | 31/10 | 1 in operation |
| Indoor | 1 | 420 | 32/62 | In operation |
| | 3 | 360 | 32/62 | In operation |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Location | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|---|
| PORTOGRUARO | Indoor | 1 | 400 | 32/62 | In operation |
| | | 1 | 420 | 32/62 | Hidden, no report |
| | | 1 | 360 | 32/62 | In operation |
| SAN MICHELE DEL QUARTO | Indoor | 2 | 2.100 | 54/10 | In operation |
| MONASTIER | Indoor | 2 | 5.300 | 50/30 | In operation |
| | | 1 | 200 | 30/10 | In operation |
| ODERZO | Indoor | 2 | 1.000 | 50/10 | In operation |
| CONEGLIANO | Indoor | 2 | 1.000 | 50/10 | 1 Hidden, no report - 1 debris |
| | | 1 | 2.000 | 50/10 | Hidden, no report |
| FELTRE | Indoor | 2 | 2.000 | 50/10 | 1 in operation - 1 dam no report |
| TREVISO | Indoor | 2 | 3.000 | 50/10 | 1 in operation - 1 hid report |
| | | 1 | 6.000 | 50/10 | In operation |
| | | 1 | 1.500 | 11/10 | In operation |
| MESTRE | Indoor & outdoor | 3 | 6.000 | 50/10 | 2 in operation - 1 hid no report |
| | | 2 | 22.000 | 130/50 | 1 in operation - 1 hid no report |
| | | 1 | 6.000 | 11/10 | Damaged, no report |
| VENEZIA- San Giobbe | Indoor | 1 | 4.800 | 50/6 | In operation |
| | | 2 | 5.000 | 50/6 | In operation |
| | | 1 | 6.000 | 50/6 | In operation |
| VENEZIA- Sacca Fisola | Indoor | 1 | 4.200 | 50/10 | Damaged, no report |
| | | 1 | 5.000 | 50/6 | In operation |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|
| Indoor | 1 | 400 | 32/62 | In operation |
| | 1 | 420 | 32/62 | Hidden, no report |
| | 1 | 360 | 32/62 | In operation |
| Indoor | 2 | 2.100 | 54/10 | In operation |
| Indoor | 2 | 5.300 | 50/30 | In operation |
| | 1 | 200 | 30/10 | In operation |
| Indoor | 2 | 1.000 | 50/10 | In operation |
| Indoor | 2 | 1.000 | 50/10 | 1 Hidden, no report - 1 under debris |
| | 1 | 2.000 | 50/10 | Hidden, no report |
| Indoor | 2 | 2.000 | 50/10 | 1 in operation - 1 damaged, no report |
| Indoor | 2 | 3.000 | 50/10 | 1 in operation - 1 hiddon, no report |
| | 1 | 6.000 | 50/10 | In operation |
| | 1 | 1.500 | 11/10 | In operation |
| Indoor & outdoor | 3 | 6.000 | 50/10 | 2 in operation - 1 hidden, no report |
| | 2 | 22.000 | 130/50 | 1 in operation - 1 hidden, no report |
| | 1 | 6.000 | 11/10 | Damaged, no report |
| Indoor | 1 | 4.800 | 50/6 | In operation |
| | 2 | 5.000 | 50/6 | In operation |
| | 1 | 6.000 | 50/6 | In operation |
| Indoor | 1 | 4.200 | 50/10 | Damaged, no report |
| | 1 | 5.000 | 50/6 | In operation |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Location | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|---|
| MIRA | Indoor | 2 | 3.000 | 50/6 | 1 Damaged - no report - 1 |
| | | 1 | 1.000 | 10/6 | 1 In operation |
| PADOVA- Bassanello | Indoor | 2 | 6.000 | 49/6,5 | 1 in operation - 1 hidde report |
| PADOVA- Via Trieste | Indoor | 3 | 3.000 | 49/6,5 | 1 hidden, no report - 2 operation |
| | | 1 | 6.000 | 49/6,5 | In operation |
| PIAZZOLA | Indoor | 2 | 1.000 | 50/6,5 | In operation |
| BASSANO- ANGARANO | Indoor & outdoor | 3 | 4.000 | 50/10 | 1 in operation - 1 damag report - 1 hidden, no re |
| | | 2 | 2.100 | 50/10 | Hidden, no report |
| MARANO | Indoor | 2 | 4.000 | 50/10 | 1 in operation - 1 damag report |
| | | 1 | 2.000 | 50/10 | Destroyed |
| NOVALE | Indoor | 3 | 2.000 | 50/10 | 2 in operation - 1 hidde report |
| BUSSOLENGO | Indoor & outdoor | 3 | 4.000 | 50/10 | 2 in operation - 1 hidde report |
| ARZIGNANO | Indoor | 2 | 2.000 | 50/10 | In operation |
| VICENZA Porta Cengio | Indoor | 1 | 4.000 | 50/10 | In operation |
| | | 1 | 1.250 | 50/10 | Hidden, no report |
| VICENZA Porta Padova | Indoor | 2 | 4.000 | 50/10 | 1 in operation-1 hidden |
| | | 1 | 1.250 | 50/10 | Hidden, no report |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV | Present condition |
|---|---|---|---|---|
| Indoor | 2 | 3.000 | 50/6 | 1 Damaged - no report - 1 hidden |
| | 1 | 1.000 | 10/6 | 1 In operation |
| Indoor | 2 | 6.000 | 49/6,5 | 1 in operation - 1 hidden, no report |
| Indoor | 3 | 3.000 | 49/6,5 | 1 hidden, no report - 2 in operation |
| | 1 | 6.000 | 49/6,5 | In operation |
| Indoor | 2 | 1.000 | 50/6,5 | In operation |
| Indoor & outdoor | 3 | 4.000 | 50/10 | 1 in operation - 1 damaged, no report - 1 hidden, no report |
| | 2 | 2.100 | 50/10 | Hidden, no report |
| Indoor | 2 | 4.000 | 50/10 | 1 in operation - 1 damaged, no report |
| | 1 | 2.000 | 50/10 | Destroyed |
| Indoor | 3 | 2.000 | 50/10 | 2 in operation - 1 hidden, no report |
| Indoor & outdoor | 3 | 4.000 | 50/10 | 2 in operation - 1 hidden, no report |
| Indoor | 2 | 2.000 | 50/10 | In operation |
| Indoor | 1 | 4.000 | 50/10 | In operation |
| | 1 | 1.250 | 50/10 | Hidden, no report |
| Indoor | 2 | 4.000 | 50/10 | 1 in operation-1 hidden no rep. |
| | 1 | 1.250 | 50/10 | Hidden, no report |

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Declassified E.O. 12356 Section 3.3/NND No. 785019



| Location | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV. | Present condition |
|---|---|---|---|---|---|
| LONIGO | Indoor | 2 | 2.000 | 50/10 | In operation |
| COLOGNA | Indoor | 3 | 1.000 | 50/10 | In operation |
| LEGNAGO | Indoor | 2 | 4.000 | 50/10 | 1 in operation - 1 hidden report |
| | | 1 | 2.000 | 50/10 | In operation |
| OSTIGLIA | Indoor | 2 | 500 | 60/10 | Hidden, no report |
| | | 1 | 2.000 | 60/10 | Hidden, no report |
| TORRICELLA | Indoor | 2 | 2.000 | 50/10 | 1 in operation - 1 hidden report |
| LENDINARA | Indoor | 3 | 2.000 | 49/11 | 2 in operation - 1 hidden report |
| ROVIGO | Indoor | 2 | 4.000 | 50/10 | 1 in operation - 1 hidden report |
| | | 1 | 2.000 | 50/10 | In operation |
| ESTE | Indoor & outdoor | 2 | 4.000 | 50/10 | In operation |
| BATTAGLIA | Indoor | 2 | 2.000 | 50/10 | In operation |
| PONTELONGO | Indoor & outdoor | 2 | 4.000 | 50/10 | 1 hidden, no report - 1 d ed, no report |
| CHIOGGIA (Brondolo) | Indoor & outdoor | 2 | 3.000 | 50/10 | 1 in operation - 1 hidden report |
| ADRIA | Indoor | 2 | 4.000 | 50/10 | In operation |
| CA' TIEPOLO | Indoor & outdoor | 2 | 4.000 | 50/10 | Hidden, no report |
| CODIGORO | Indoor | 3 | 4.000 | 50/10 | 2 destroyed - 1 no repor |
| FERRARA- Zona Industriale | Indoor & outdoor | 2 | 6.000 | 50/10 | In operation |
| FERRARA- S.Luca | Indoor | 3 | 3.000 | 50/10 | In operation |

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Declassified E.O. 12356 Section 3.3/NND No. 785019



| Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV. | Present condition |
|---|---|---|---|---|
| Indoor | 2 | 2.000 | 50/10 | In operation |
| Indoor | 3 | 1.000 | 50/10 | In operation |
| Indoor | 2 | 4.000 | 50/10 | 1 in operation - 1 hidden, no report |
| | 1 | 2.000 | 50/10 | In operation |
| Indoor | 2 | 500 | 60/10 | Hidden, no report |
| | 1 | 2.000 | 60/10 | Hidden, no report |
| Indoor | 2 | 2.000 | 50/10 | 1 in operation - 1 hidden, no report |
| Indoor | 3 | 2.000 | 49/11 | 2 in operation - 1 hidden, no report |
| Indoor | 2 | 4.000 | 50/10 | 1 in operation - 1 hidden, no report |
| | 1 | 2.000 | 50/10 | In operation |
| Indoor & outdoor | 2 | 4.000 | 50/10 | In operation |
| Indoor | 2 | 2.000 | 50/10 | In operation |
| Indoor & outdoor | 2 | 4.000 | 50/10 | 1 hidden, no report - 1 damaged, no report |
| Indoor & outdoor | 2 | 3.000 | 50/10 | 1 in operation - 1 hidden, no report |
| Indoor | 2 | 4.000 | 50/10 | In operation |
| Indoor & outdoor | 2 | 4.000 | 50/10 | Hidden, no report |
| Indoor | 3 | 4.000 | 50/10 | 2 destroyed - 1 no report |
| lo Indoor & outdoor | 2 | 6.000 | 50/10 | In operation |
| Indoor | 3 | 3.000 | 50/10 | In operation |

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Declassified E.O. 12356 Section 3.3/NND No. 785019



| Location | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV. | Present condition |
|---|---|---|---|---|---|
| PORTOMAGGIORE | Indoor & outdoor | 2 | 15.000 | 130/50 | Damaged, no report |
| | | 1 | 2.100 | 50/15 | Destroyed |
| | | 1 | 2.000 | 50/15 | Destroyed |
| | | 1 | 3.000 | 50/15 | Destroyed |
| ARGENTA | Indoor | 1 | 2.000 | 50/15 | Destroyed |
| | | 1 | 25.000 | 55/50 | Destroyed |
| BATTIFERRO (Bologna) | Indoor | 1 | 10.000 | 50/15 | Destroyed |
| | | 2 | 6.000 | 50/15 | Destroyed |
| | | 4 | 6.000 | 50/3 | Destroyed |
| TRE MADONNE (Bologna) | Indoor & outdoor | 1 | 15.000 | 125/50 | No report |
| | | | 15.000 | 125/10 | No report |
| | | | 10.000 | 50/10 | No report |
| PIOPPE DI SALVARO | Indoor | 1 | 1.500 | 50/15 | Destroyed |
| | | 1 | 755 | 50/15 | Destroyed |
| ORTIGNOLA (Imola) | Indoor & outdoor | 2 | 3.500 | 125/15 | Destroyed |
| COTIGNOLA | Indoor | 2 | 3.000 | 50/15 | Destroyed |
| RAVENNA | Indoor | 1 | 2.000 | 50/15 | No report - probably destr |
| | | 3 | 1.000 | 50/2 | No report - probably destr |
| | | 1 | 1.500 | 50/15 | No report - probably destr |
| FORLI' | Indoor & outdoor | 1 | 25.000 | 130/50 | Destroyed |
| | | 1 | 20.000 | 130/50 | Destroyed |
| | | 3 | 3.000 | 50/15 | Destroyed |
| CESENA | Indoor | 1 | 3.000 | 50/15 | Destroyed |
| | | 1 | 3.000 | 50/5 | Destroyed |
| | | 1 | 2.000 | 30/15 | Destroyed |

Declassified E.O. 12356 Section 3.3/NND No. 785019



| | Indoor or outdoor | N. of units | Capacity of each unit kVA | Transf. ratio kV. | Present condition |
|---|---|---|---|---|---|
| ORE | Indoor & outdoor | 2 | 15.000 | 130/50 | Damaged, no report |
| | | 1 | 2.100 | 50/15 | Destroyed |
| | | 1 | 2.000 | 50/15 | Destroyed |
| | | 1 | 3.000 | 50/15 | Destroyed |
| | Indoor | 1 | 2.000 | 50/15 | Destroyed |
| | | 1 | 25.000 | 55/50 | Destroyed |
| | Indoor | 1 | 10.000 | 50/15 | Destroyed |
| | | 2 | 6.000 | 50/15 | Destroyed |
| | | 4 | 6.000 | 50/3 | Destroyed |
| | Indoor & outdoor | 1 | 15.000 | 125/50 | No report |
| | | | 15.000 | 125/10 | No report |
| | | | 10.000 | 50/10 | No report |
| ALVARO | Indoor | 1 | 1.500 | 50/15 | Destroyed |
| | | 1 | 755 | 50/15 | Destroyed |
| | Indoor & outdoor | 2 | 3.500 | 125/15 | Destroyed |
| | Indoor | 2 | 3.000 | 50/15 | Destroyed |
| | Indoor | 1 | 2.000 | 50/15 | No report - probably destroyed |
| | | 3 | 1.000 | 50/2 | No report - probably destroyed |
| | | 1 | 1.500 | 50/15 | No report - probably destroyed |
| | Indoor & outdoor | 1 | 25.000 | 130/50 | Destroyed |
| | | 1 | 20.000 | 130/50 | Destroyed |
| | | 3 | 3.000 | 50/15 | Destroyed |
| | Indoor | 1 | 3.000 | 50/15 | Destroyed |
| | | 1 | 3.000 | 50/5 | Destroyed |
| | | 1 | 2.000 | 30/15 | Destroyed |

Declassified E.O. 12356 Section 3.3/NND No. 785019

SOCIETÀ' ADRIATICA DI ELETTRICITA'

VENICE - MESTRE STEAM PLANT

Machinery installed

Boilers: 2 boilers - oil fired - 70.000 Kg. steam per hour each - one efficient - one under repairs
3 boilers - imported coal fired - Riley grates - 40.000 Kg. steam per hour each
1 boiler - pulverized coal (Italian coal) - 80.000 Kg. steam per Hour

The total steam generating capacity - if the boilers are O.K. - is :

| | | |
|---|---|---|
| with oil | 70.000 | Kg./hour |
| with imported coal | 120.000 | " " |
| with Italian coal | 80.000 | " " |
| | 270.000 | Kg./hour |

In a continuous operation we may foresee only one half, it is. 135.000 Kg. steam per hour - or 25.000 kW.

Turbine-generators : The following units are installed :

2 x 15.000 kW.
1 x 25.000 kW.

The units can carry out the 25.000 kW. average power.

Transformers:

1 x 36.000 kVA - 130/50/10 - in operating condition
1 x 36.000 kVA - 130/50/10 - damaged
1 x 22.000 kVA - 10/50 - in operating condition
1 x 22.000 kVA - 10/50 - damaged
1 x 6.000 kVA - 50/10 - damaged

Present generating capacity:

- Boilers - We are installing all the auxiliary machineries hidden. The work is scheduled to be completed on or about May 31. Starting June the 1.st we can operate 4 coal fired boilers and 1 oil fired boiler, with peak generation of 270.000 Kg. per hour of steam and continous load of 135.000.
- Turbines - The hidden exciter and control switches are underway to be mounted on one 15.000 kW. unit, and are supposed to be in operation on May 31st. The completion of the second 15.000 kW. unit and of the 25000 kW. unit - damaged by bombing - is supposed on or about three months.

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Declassified E.O. 12356 Section 3.3/NND No. 785019



- Transformers - 1 x 22.000 kVA 10/50 kV. and 1 x 36.000 kVA 130/50/10 are in operating condition. The three other transformers - damaged - are supposed to be repaired during next summer.
We may foresee that the generating capacity will be :
15.000 kW. in June
55.000 kW. in August.

- Stores - 1.000 tons of coal (Italian - German) are stored.
The two diesel oil tanks (1x7000 tons - 1x3000 tons) damaged by bombing may be repaired: one in June, the second one in December.

- Fuel required - The plant operates as emergency supply, when the transmission lines are damaged, and during the winter - during the dry season.
The plant is so organised that :
0,650 Kg. coal (7000 calories) per kWh
0,500 Kg. diesel oil (10.000 calories) per kWh
are required.
With 1x25.000 kW. unit foreseen ready June 1st, we may generate 10.000.000 kWh pro month.
The fuel required are :
Ton. 6.500 coal pro month
or Ton. 5.000 Diesel oil per month.

---

Venice, May, 8 1945

Declassified E.O. 12356 Section 3.3/NND No. 785019

# SOCIETA' ADRIATICA DI ELETTRICITA'

Chairman : Senatore Dott. Ing. Achille Gaggia

General Managers : Dott. Ing. Antonio Rossi - Dott. Ing. Luigi Gaggia

Generation Dep.

Manager :

Dott. Ing. Mario Mainardis

Operation & Transmission Dep.

Manager :

Dott. Ing. Roberto Marin

Hydraulic Works

Manager :

Dott. Ing. Carlo Semenza



Ined 45

Declassified E.O. 12356 Section 3.3/NND No. 785019

# SOCIETA' ADRIATICA DI ELETTRICITA'

Chairman : Senatore Dott. Ing. Achille Gaggia

General Managers : Dott. Ing. Antonio Rossi - Dott. Ing. Luigi Gaggia

| ...ion Dep. | Operation & Transmission Dep. | Hydraulic Works |
|---|---|---|
| : | Manager : | Manager : |
| ...g. Mario Mainardis | Dott. Ing. Roberto Marin | Dott. Ing. Carlo Semenza |



Sheet 45

Declassified E.O. 12356 Section 3.3/NND No. 785019

RECEIVED
P.W. & U. S/C A.C.
12 MAY 1945 197

HEADQUARTERS-EMILIA REGION
ALLIED MILITARY GOVERNMENT
APO 394
Public Works and Utilities

P.W.&U S/C

9 May 1945

31

Ref. : RIX/PU/02.2

Subject : Transmission line RIMINI-CESENA

To : HQ214 Sub-Area CMF

R

1. Ref. your 403/7/Q, dated 1 May 1945.

2. This line in question would definitely connect with the ANCONA source and there is no independent source of supply. In view of some doubt being raised in your letter, we will withold progress on the project until further word from you on the matter.

FC FORLI
A. C.

E.H. Rogers

Capt. E.H. ROGERS
Capt. C.E.
Electrical Officer

COPY TO:

1. FC FORLI'

1. Adv.Sect.Electr.Div. AC

5790

0 5 6 31

Declassified E.O. 12356 Section 3.3/NND No. 785019

WK/jam

RECEIVED
P.W. & U. S/C A.C.
11 MAY 1945 197

HEADQUARTERS
VENEZIE REGION
Allied Military Government
APO 394
Public Works & Utilities Division

31

8 May 1945

TO : Major C.S. Wilcox, Electrical Division

SUBJECT: Collection of Electrical Data

FILE No: RXII/PWU/700

1. It will be necessary for you and Capt. P.M. Vannoy to visit Provinces in 5 Army Area to get the necessary electrical information for the "Special Electrical Division" of Allied Commission.

2. The Provinces under 5 Army are Vicenza, Verona, Bolzano and Trento.

3. Before making your contacts with the Electrical Power Companies and Stations, it will be necessary for you to first visit A.M.G. 5 Army to inform them the nature of your duties and obtain their authority to travel in their area.

W. KNIGHT, Major
Regional Engineer

Copies to:
HQ, A.M.G. 5 Army.
Public Works & Utilities Sub-Commission
Electrical Division.
Regional Commissioner Venezia Region
Capt. P.M. Vannoy

5789

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081
Ext. 317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

WML/ao

30

7 May 1945

Reference : 197/PWU

Subject : Officials of Electrical Companies in Northern Italy

To : REGIONAL COMMISSIONER LOMBARDIA REGION
(Attention Regional Engineer)

1. Attached is a list of officials of Electrical Companies which may be useful to you.

By Command of Rear Admiral STONE,

W.M.LAPPER
Lieut-Colonel,
Chief Elec. Div.

1 enclosure

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081
Ext. 317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

WML/ac

29

Reference : 197/PWU

7 May 1945

Subject : Officials of Electrical Companies in Northern Italy

To : REGIONAL COMMISSIONER PIEMONTE REGION
(Attention Regional Engineer)

1) Attached is a list of officials of the Electrical Companies which may be useful to you.

By Command of Rear Admiral STONE,

W.M.LAPPER
Lieut-Colonel,
Chief Elec. Div.

1 enclosure

Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081
Ext. 317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

MML/ac

Reference : 197/PWU

7 May 1945

Subject : Officials of Electrical Companies
Northern Italy

28

To : REGIONAL COMMISSIONER VENEZIA REGION
(Attention Regional Engineer)

1. Attached is a list of officials of Electrical Companies which may be useful to you.

By Command of Rear Admiral STONE,

W.M.LAPPER
Lieut-Colonel,
Chief Elec. Div.

1 Enclosure

A. E. I. E.

*Associazione Esercenti Imprese Elettriche*

27

287365

N. 518
da citare nella risposta

*Roma,* 5 maggio 1945
Via Boncompagni, 14

P.W. & C. S/C A.C.
5 MAY 1945 197

Egr.Sig.T.Colon.W.M.Lapper
Allied Commission - Sub Commission
Public Works a. Utilities

R O M A

Sig.Colonnello,

Le scrivo a nome dell'Ing.Silva,Direttore dell'Associazione, trattenuto a letto da indisposizione.

L'Ing.Silva, in un recente colloquio con l'egr.Colonnello Jenny, ha appreso che poteva esserle gradito un elenco degli esponenti dell'industria elettrica del Nord in relazione alla prossima costituzione anche nel Nord, di quei Comitati tecnici che già funzionano nella restante parte d'Italia.

Le trasmetto pertanto quattro elenchi, rispettivamente per il Piemonte, la Lombardia, le Venezie e la Liguria.

La nostra Associazione sarà ben lieta di fornirLe ogni altra informazione che Ella fosse per desiderare e per facilitare nel modo migliore il compito che i Suoi Uffici saranno chiamati a svolgere anche nell'Italia del Nord.

Voglia gradire, Egregio Colonnello, i saluti migliori

(Michele Battuello)

Allegati 4

MB/mg

Declassified E.O. 12356 Section 3.3/NND No. 785019

P.W. & C. S/C A.C.
5 MAY 1945 197

Egr.Sig.T.Colon.F.M.Lapper
Allied Commission - Sub Commission
Public Works a. Utilities

R O M A

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Voglia gradire, Egregio Colonnello, i saluti migliori

(Michele Battuello)

Allegati 4

MB/mg

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Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 489081
Ext. 317

RESTRICTED

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

WML/ao

FILE

26

Reference : 197/PWU

4 May 1945

Subject : Rehabilitation of Electric Power Plants and Transmission Systems

To : REGIONAL COMMISSIONER TOSCANA REGION

1. Attached is a copy of a letter 197/PWU dated 14/4/45 which was sent to Regional Commissioner North Italy Regions.

2. Maj.E.J.Barry and Capt. H.C.Best will be working from Florence Office on Electrical Rehabilitation Work in and around this area. They will be working under conditions similar to the ones set out in this letter and this is sent to you to make clear their assignment.

By Command of Rear Admiral STONE,

W.M.LAPPER
Lieut-Colonel,
Chief Elec. Div.

cc : Maj. E.J.Barry

1 enclosure

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05701

Declassified E.O. 12356 Section 3.3/NND No. 785019

COPY

R E S T R I C T E D
HEADQUARTERS ALLIED COMMISSION
APO 394
Economic Section

24 April 1945

Reference : 197/PWU

Subject : Rehabilitation of Electric Power Plants and Transmission Systems

To : REGIONAL COMMISSIONER EMILIA REGION
LIGURIA REGION
PIEMONTE REGION
LOMBARDIA REGION
VENEZIA REGION

1. The rehabilitation of the electrical generating stations and transmission systems in Italy has been carried out by the Electrical Division of the Public Works and Utilities Sub-Commission using field engineers for this purpose. In order to reduce the amount of time spent on travelling it was found expedient to group the field officers into Constructional Teams, one team operating from a headquarters located in Florence, and one from a Headquarters in Rome.

2. A.C. Policy requires that all field personnel be assigned to some established headquarters and accordingly the officers of the two Electrical Reconstruction teams for Northern Italy are assigned for accomodation and rations to Liguria and Venezia Regions, respectively. Officers of team number one are : Major A.Crowther (B), Capt. A.E.Durran (A), and Capt. R.F. Lowdon (B) and are assigned to Liguria Region. Officers of team number two are : Major C.S. Wilcox (A), Capt.P.M.Vannoy (A) and Capt. H.G.Best (B) and are assigned to Venezia Region. These locations are considered to be the most suitable points from which initial surveys can be made for the purpose of determining electrical rehabilitation requirements in Northern Italy.

3. It will be appreciated that electrical rehabilitation work must be carried out, as at present, on an overall planning basis consistent with this policy it is essential that the Electrical Reconstruction personnel be under the direction of, and will submit reports directly to, the Electrical Division of the Public Works and Utilities Sub-Commission.

4. Lt.Col.G.F.Parker, a representative from this Headquarters is assigned to and will be located in the Lombardia Regional Headquarters for the purpose of coordinating the activities of the reconstruction teams in the five northern Regions and effecting necessary liaison with the Electric Power Companies and Military authorities, including Regional Engineer and furnish reports as required.

578

By command of Rear Admiral STONE :

A.G. ANTOLINI
Acting Vice President,
Economic Section

Copies to : Executive Commissioner
Establishment Section
P.W. & U. S/C (5 copies)

Declassified E.O. 12356 Section 3.3/NND No. 785019

Enclosure 1 to

Tel. 478.906

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub - Commission

VER/lam

25

2 May, 1945

Reference: 197/PWU

SUBJECT : Transmittal of AFHQ Preliminary Engineer Plan for Electric Power Rehabilitation, North Italy.

TO : Advanced Section, Electrical Division, P.W. & U. Sub/Comission (Att.Lt.Col. G.F. Parker)

1. Transmitted herewith for your information are five copies of a preliminary engineer plan for electric power rehabilitation in North Italy, prepared by the Office of the Director of Works, AFHQ. This plan was made sometime ago, before the latest Allied advance started, and is probably outmoded by the present situation. However, copies are being furnished in the event that future reference may be made to it. Appendix III, mentioned in the plan is being enclosed. The other appendices are being held here for the present.

V.S. RENTON,
Lieut-Colonel, Inf.
Chief Operations and Trans.Dept.
Electrical Division

Inclosure:

4 copies of Plan
with Appendix III

5785

Declassified E.O. 12356 Section 3.3/NND No. 785019

File 197

19.02

MEMO FOR FILES

WML/ce

24

225/PWU. 18 Apr 45.

SUBJECT: Visit of Mr. VERDI and Mr. SECONDI.

1. With reference to the visit of Mr. Verdi and Mr. Secondi who arrived here from Switzerland on Saturday, 31 March 1945.

2. We have had a number of talks with them, but there is very little information which they could give us regarding the electrical position in Northern Italy beyond what we already know from reports received through Military channels.

3. Their visit, however, was mainly in connection with a supply of electricity from Switzerland to Northern Italy and it is proposed that the existing transmission line from Bodio to Ponte Tresa, 80 KV. 12/15 KW. capacity, be altered to 130 KV. and 60 KW. capacity.

4. Mr. Verdi and Mr. Secondi have had meetings with the Finance Sub-Commission and with the Italian Finance officers and it is now understood that they have made suitable arrangements for payment to Switzerland for the necessary alterations which the Swiss will make into this line.

5. They are now returning to Switzerland and will arrange with the Swiss to commence work immediately, the project taking approximately 4-5 months to complete.

W.M. LAPPER,
Lieut-Colonel,
Chief, Elec. Div.

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23/9/31

Declassified E.O. 12356 Section 3.3/NND No. 785019

23

# HEADQUARTERS ALLIED COMMISSION
APO 304
## ECONOMIC SECTION

R...
P.W. & D. ...I.C.
28 APR 1945 197

# ROUTING AND WORK SHEET

Each note must be numbered and each space completely filled in. THIS WORK SHEET MUST NOT BE REMOVED FROM THE CORRESPONDENCE TO WHICH ATTACHED UNTIL ACTION IS COMPLETED AND THEN FILED WITH FILE COPIES OF COMMUNICATION TO WHICH IT PERTAINS. A line will be drawn the full width of the page under each note.

SUBJECT Electric Power Requirements

| No | Date | To | REMARKS | From |
|---|---|---|---|---|
| 1 | 27/4 | P.W. & D. attention Col. Parker | attached for records | Sanderson S/C Capel Roberts |

5783

PAGE ....

Use other side

Declassified E.O. 12356 Section 3.3/NND No. 785019

COPY

RECEIVED
P.W. & U. S/C A.C.
28 APR 1945 197

ALLIED MILITARY GOVERNMENT
HEADQUARTERS EIGHTH ARMY
REAR

: AIX/IND/36 14 April 1945

Subject : Estimated Electric power requirements for Emilia Region

To : Industry Sub-Commission Allied Commission.

1) Your AC/5628/IND refers.

2) Attached are the estimated power requirements for the months of May, June and July for the provinces of Forli and Liberated Ravenna.

3) Only such plants are considered which are little damaged, or are under repair and are able to start production as soon as power is available, and, when the necessary raw materials are supplied.

4) This return will be amended as soon as more detailed information is available.

H.B. BRADBURY
MAJOR C.M.F.
AIR COMMODORE
OFFICER COMMANDING
AMG EIGHT ARMY

Copies to : Capt. Rogers
Fleet
File

Declassified E.O. 12356 Section 3.3/NND No. 785019

EMILIA REGION — FORLI PROVINCE

| INDUSTRY | MAY | | JUNE | | JULY | | AUGUST | |
|---|---|---|---|---|---|---|---|---|
| | KW | KWH | KW | KWH | KW | KWH | KW | KWH |
| Building Materials | 250 | 25,000 | 500 | 60,000 | 800 | 100,000 | 1,000 | 150,000 |
| Flour Mills | 500 | 100,000 | 500 | 100,000 | 800 | 200,000 | 800 | 300,000 |
| Food Industry | | | | | | | | |
| Including Cold Storage, Ice etc. | 175 | 65,000 | 300 | 90,000 | 400 | 120,000 | 750 | 180,000 |
| Textiles | 50 | 12,000 | 50 | 12,000 | 100 | 24,000 | 100 | 24,000 |
| Footwear | 200 | 48,000 | 200 | 48,000 | 200 | 48,000 | 200 | 48,000 |
| Foundries | 150 | 36,000 | 200 | 48,000 | 200 | 48,000 | 250 | 60,000 |
| Saw Mills Boat Builders | 150 | 36,000 | 200 | 48,000 | 300 | 60,000 | 400 | 80,000 |
| Mechanical Industries | 100 | 24,000 | 200 | 48,000 | 200 | 48,000 | 250 | 60,000 |
| Hemp | 150 | 10,000 | 100 | 15,000 | 150 | 25,000 | 150 | 25,000 |
| Miscellaneous | --- | ----- | 100 | 24,000 | 150 | 36,000 | 200 | 40,000 |

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Declassified E.O. 12356 Section 3.3/NND No. 785019



EMILIA REGION FORLI' PROVINCE

5783

| | MAY | | JUNE | | JULY | | AUGUST | |
|---|---|---|---|---|---|---|---|---|
| | KW | KWH | KW | KWH | KW | KWH | KW | KWH |
| | 250 | 25,000 | 500 | 60,000 | 800 | 100,000 | 1,000 | 150,000 |
| | 500 | 100,000 | 500 | 100,000 | 800 | 200,000 | 900 | 300,000 |
| | | | | | | | | |
| ago Ice etc. | 175 | 65,000 | 300 | 90,000 | 400 | 120,000 | 750 | 180,000 |
| | 50 | 12,000 | 50 | 12,000 | 100 | 24,000 | 100 | 24,000 |
| | 200 | 48,000 | 200 | 48,000 | 200 | 48,000 | 200 | 48,000 |
| | 150 | 36,000 | 200 | 48,000 | 200 | 48,000 | 250 | 60,000 |
| dera | 150 | 36,000 | 200 | 48,000 | 300 | 60,000 | 400 | 80,000 |
| ss | 100 | 24,000 | 200 | 48,000 | 200 | 48,000 | 250 | 60,000 |
| | 150 | 10,000 | 100 | 15,000 | 150 | 25,000 | 150 | 25,000 |
| | --- | ----- | 100 | 24,000 | 150 | 36,000 | 200 | 40,000 |

Declassified E.O. 12356 Section 3.3/NND No. 785019

RAVENNA PROVINCE
(Liberated part - as on April 10th only)

| INDUSTRY | EMILIA REGION MAY KW | MAY KWH | JUNE KW | JUNE KWH | JULY KW | JULY KWH | AUGUST KW | AUGUST KWH |
|---|---|---|---|---|---|---|---|---|
| Building Materials | 50 | 8,000 | 100 | 15,000 | 200 | 30,000 | 200 | 30,000 |
| Flour Mills | 100 | 30,000 | 200 | 60,000 | 200 | 60,000 | 300 | 100,000 |
| Food Industry --Including-Cold-Storage- Ice etc. | 50 | 7,000 | 100 | 15,000 | 150 | 20,000 | 200 | 25,000 |
| Textiles | 20 | 4,000 | 50 | 10,000 | 100 | 20,000 | 100 | 20,000 |
| Footwear | 100 | 20,000 | 200 | 40,000 | 200 | 40,000 | 200 | 40,000 |
| Foundries | 25 | 5,000 | 50 | 10,000 | 100 | 20,000 | 100 | 20,000 |
| Saw Mills | 50 | 10,000 | 100 | 20,000 | 150 | 30,000 | 150 | 30,000 |
| Mechanical Industries | 30 | 6,000 | 50 | 10,000 | 100 | 20,000 | 100 | 20,000 |
| Camp | 120 | 20,000 | 250 | 40,000 | 400 | 60,000 | 400 | 60,000 |
| Miscellaneous | 20 | 4,000 | 40 | 8,000 | 50 | 10,000 | 50 | 10,000 |

Declassified E.O. 12356 Section 3.3/NND No. 785019

EMILIA REGION — RAVENNA PROVINCE
(Liberated part - as on April 10th only)

| T R Y | MAY | | JUNE | | JULY | | AUGUST | |
|---|---|---|---|---|---|---|---|---|
| | KW | KWH | KW | KWH | KW | KWH | KW | KWH |
| ils | 50 | 8,000 | 100 | 15,000 | 200 | 30,000 | 200 | 30,000 |
| | 100 | 30,000 | 200 | 60,000 | 200 | 60,000 | 300 | 100,000 |
| | 50 | 7,000 | 100 | 15,000 | 150 | 20,000 | 200 | 25,000 |
| storage | | | | | | | | |
| | 20 | 4,000 | 50 | 10,000 | 100 | 20,000 | 100 | 20,000 |
| | 100 | 20,000 | 200 | 40,000 | 200 | 40,000 | 200 | 40,000 |
| | 25 | 5,000 | 50 | 10,000 | 100 | 20,000 | 100 | 20,000 |
| | 50 | 10,000 | 100 | 20,000 | 150 | 30,000 | 150 | 30,000 |
| ustries | 30 | 6,000 | 50 | 10,000 | 100 | 20,000 | 100 | 20,000 |
| | 120 | 20,000 | 250 | 40,000 | 400 | 60,000 | 400 | 60,000 |
| | 20 | 4,000 | 40 | 8,000 | 50 | 10,000 | 50 | 10,000 |

Declassified E.O. 12356 Section 3.3/NND No. 785019

Title 197

Tel.489081
Ext.317

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

WEL/ee

197/PWU.

27 Apr 45.

SUBJECT: Electricity Northern Italy.

TO : Lt.Col. C.F. Parker,
Advanced Section Electrical Division,
Public Works & Utilities, A.C.

22

1. For your information all officers are now to be sent to the Regions to which they are assigned. This includes the electrical teams. Each of these officers will be receiving instructions to report to their regions.

2. You may decide that this is an arrangement which will fit in with your plans. On the other hand, if you still feel that you wish to keep some of these officers with you, you should either make a private arrangement direct with the Regional Engineer concerned or communicate with me requesting alteration in assignment.

3. I would remind you that the transport position will also have to be considered. If the officers in the electrical team report to their regions, that is Venezia and Liguria, without transport, it is not known whether they will be able to obtain this from the region. You may consider that it is the best plan for them to report without transport and allow the Headquarters transport to come back here, and, since electrical teams are always to be assigned to regions, it may be possible for the region to supply the transport.

4. Perhaps you will let me know what you decide to do in this matter.

W.M. LAPPER,
Lieut-Colonel,
Chief, Elec.Division.

copy to: file 122
and " 218.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

MEMORANDUM

(197)

24 April 1945
1105 hours

TELEPHONE CONVERSATION
MAJOR CROWTHER to CAPTAIN VANNOY

Bologna

Power source from North has been cut.
Conductor has been removed on all lines feeding from South.

Thermal plant in operation at 500 KW load being used for essential services.

4000 KW is needed immediately for water supply, hospitals, etc.

Estimated 8000 KW later will satisfy all essential civilian needs.

Gas plant undamaged - Insufficient coal for gas service. Sufficient coal is on hand to keep ovens warm. 20 tons of coal per day will furnish gas for 2 hours each day.

(This is from report by Lt.Col. Holmgreen, C.A.O. Bologna).

Modena

Trams are running. Light, water and pumps are O.K. Life is normal. Do not know source of power supply.

Distribution
Col. Lapper
Col. Renton
Major Berry
Major Price
Capt. Vannoy

STILL TRYING TO FIND OUT SITUATION FROM COL. COOLEY; HE & MAJOR WILCOX ARE GOING TO CORFINO TOMORROW.

R

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Declassified E.O. 12356 Section 3.3/NND No. 785019

(197) 1 File

WHL/oe

MEMORANDUM

20

PLANS FOR REHABILITATION OF PUBLIC UTILITIES

IN NORTHERN ITALY

1. As soon as the Military will permit, the Regional Engineer Officers will assist and advise the Electrical Companies, Water Supply Authorities and other utilities concerned regarding rehabilitation of supplies.

2. It has been our experience that utilities such as water, gas, sewerage etc. depend mainly on electricity supply for their activation and that apart from this sufficient repairs can be carried out by the Utility Companies to give a supply which may by strict rationing meet the emergency conditions.

3. In order to restore the electricity services as quickly as possible, arrangements have been made for six officers (Electrical Engineers) made up into two teams to be available to move into any part of Northern Italy. These officers will assist and advise the Electrical Companies on emergency measures for the restoration of supplies and also collect information for the purpose of overall planning.

4. The officers are operating under the direct instructions of Lt.Col. C.F. Parker who will make his headquarters with the Lombardia Region.

25 April 1945.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

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GFP/ge 19

HEADQUARTERS ALLIED COMMISSION
APO 394
Economic Section

24 April 1945

REFERENCE: 197/PWU.

SUBJECT : Rehabilitation of Electric Power Plants and Transmission Systems.

TO : Regional Commissioner, Emilia Region
Liguria Region
Piemonte Region
Lombardia Region
Venezia Region.

1. The rehabilitation of the electrical generating stations and transmission systems in Italy has been carried out by the Electrical Division of the Public Works and Utilities Sub-Commission using field engineers for this purpose. In order to reduce the amount of time spent on travelling it was found expedient to group the field officers into Constructional Teams, one team operating from a headquarters located in Florence, and one from a headquarters in Rome.

2. A.C. Policy requires that all field personnel be assigned to some established headquarters and accordingly the officers of the two Electrical Reconstruction teams for Northern Italy are assigned for accommodation and rations to Liguria and Venezia Regions, respectively. Officers of team number one are: Major A. Crowther (B), Capt. A.E. Duran (A), and Capt.R.F. Lowdon (B) and are assigned to Liguria Region. Officers of team number two are: Major C.S. Wilcox (A), Capt. P.M. Vannoy (A), and Capt. H.G. Best (B) and are assigned to Venezia Region. These locations are considered to be the most suitable points from which initial surveys can be made for the purpose of determining electrical rehabilitation requirements in Northern Italy.

3. It will be appreciated that electrical rehabilitation work must be carried out, as at present, on an overall planning basis and consistent with this policy it is essential that the Electrical Reconstruction personnel be under the direction of, and will submit reports directly to, the Electrical Division of the Public Works and Utilities Sub-Commission.



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4. Lt.Col. G.F. Parker, a representative from this Headquarters is assigned to and will be located in the Lombardia Regional Headquarters for the purpose of coordinating the activities of the reconstruction teams in the five northern Regions and effecting necessary liaison with the Electric Power Companies and Military authorities, including Regional Engineer, and furnish reports as required.

By command of Rear Admiral STONE :

A.P. Feeney
Major RA

A.G. ANTOLINI,
Acting Vice President,
Economic Section.

Copies to :
Executive Commissioner
Establishment Section
Public Works and Utilities (5 copies)

2/13/44

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel. 451

Ref. 7001/11/20. 13 April 1945

SUBJECT: Rehabilitation of Electric Power Plants and Transmission Systems: - P.W.U. S/C Personnel.

TO : V.P., Economic Section.

1. Your draft letter on this subject reference 197/PWU of 10 April submitted to the V.P., Establishment Section, has been referred to this office for a policy ruling.

2. If the officers of these electrical construction teams are to be assigned to the Regions concerned for rations and quarters only, while remaining operationally responsible to the Public Works and Utilities S/C, any clarification of their channels of responsibility and control will be a matter for decision within your Section.

3. If, because of operational necessity and special nature of their assignment, these officers are simply to be attached to the Regions but remain on the Sub Commission's assigned strength, then a letter to that effect might go forward from your Section, or the Sub Commission itself, informing the Regional Commissioners.

4. It is felt that no new policy ruling is necessary to effect this method of assignment, keeping in mind that the Section is master of its own personnel in such matters and that the Regional Commissioners, through Establishment Section, must, of course, be kept informed.

for Chief Staff Officer,
To Executive Commissioner.

Copy to: Establishment Section.

5774

Incl.: Draft letter.

Declassified E.O. 12356 Section 3.3/NND No. 785019

197

MEMO for Capt. Butcher

16 April 1945.

The following informations are concerning the situation of engineers of Electrical Companies belonging to the "Società Adriatica di Elettricità" group in 1939.

The present situation is perhaps changed for someone of them. Anyway it is believed that no change happened in the situation of Mr. Marin, Mr. Mainardis, and perhaps Mr. Ghetti.

Count Volpi di Misurata - Chairman of "Società Adriatica di Elettricità" up to 1939. At present perhaps he must have left the chairmanship.

Magineer Marin Roberto - Manager of "Soc.Adriatica di El."

" Mainardis Mario - Chief Engineer Central Stations Department and Manager "Soc.Elettrometallurgica Veneta".

" Ghetti Ottaviano - General Manager "Soc.Collina",

" Gaggia Luigi - General Manager of "Soc.Adriatica di Elettr." . It is believed that he left his charge.

" Fracanzani Giacomo - Chief Engineer Researchs Department of "Soc.Adriatica di Elettr."

" Sperti Gildo - Manager"Soc. Collina",

" Perinello Gerardo - "Soc.Adr. di Elettr."

The offices of companies belonging to the group of "Soc.Adriatica di Elettricità" are in Venice.

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JWLB/jam

RECEIVED
P.W. & U.
14 April 1945

HEADQUARTERS
VENEZIA REGION
Allied Military Government
APO 394
Public Works & Utilities Division

3 April 1945

16

TO : Provincial Commissioner - Gorizia

SUBJECT: Public Utilities (Gas, Water, Electricity).

FILE No: RXII/PWU/1.1

A. ELECTRICITY.

1. Enclosed is a list of Generating Stations in your Province. The majority of these stations feed into the Grid Network and are owned and staffed by different companies having offices, in many cases, outside the Province.

2. Rehabilitation of Power Plants and Transmission Lines.

The rehabilitation of Power Plants and Transmission Lines is the responsibility of the Allied Commission, this having been delegated to them by A.F.H.Q.

Generally speaking, military do such repairs that are immediately necessary for their operation in forward areas, leaving the long-term planning, rebuilding, and control to the Allied Commission.

3. It is, therefore, the desire of Headquarters Allied Commission to receive as soon as possible full information as to the destruction suffered by Generating Stations, and the amount of electricity generated, if the plants are still in operation. In order to obtain this information, it is necessary for certain forms to be completed as soon as possible. Copies of the forms are attached hereto. The Provincial Commissioner is requested to distribute these forms at the earliest opportunity to the parent company, if in the Province, or to the station itself. Forms are as follows:

Form E. 1. Requesting information regarding the station. This form to be completed in duplicate and returned to the Regional Engineer as soon as possible.

Weekly Electricity Report Forms. Requesting particulars of the amount of power generated. This form to be returned to the Regional Engineer at the close of each week.



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4. Applications for Electricity. In the first phase, Army will control distribution of electricity.

All applications will be forwarded by the C.A.O. through normal channels to A.M.G. Main Army, who will effect the necessary liaison with Signals and R.E.

In the second phase, when Army move forward and Districts take control, the procedure will be that as laid down in appendix "A" attached. The Distributing Company will also receive similar instructions to those contained in appendix "A".

5. The Distributing Company in Gorizia is the Azienda Municipale Gorizia located at Via 18 Agosto 15, and the Director is Ing. Isolo Reinaldi.

B. GAS

6. In 1939 Gorizia had a population of 48,000 and the Azienda Municipale Gas ed Acqua located at Via IX Agosto 15, belonged to the city and consumed approximately 8,400 tons of coal annually.

The Provincial Commissioner is requested to give Form E. 3 to the Company for completion, if the plant has suffered War Damage, and return to the Regional Engineer.

C. WATER

7. The Provincial Commissioner is requested to give Form E. 3 to the Genio Civile for completion and return to the Regional Engineer as soon as possible.

W. KNIGHT, Major
Regional Engineer



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ENGINEERING DIVISION
HEADQUARTERS REGION XII
Allied Control Commission
APO 394

PROVINCE OF GORIZIA

Hydro Stations of Electricity as of 1941

| No. | NAME OF STATION | KW of A.C. INSTALLED |
|---|---|---|
| 1 | Aidussina (Storie delle Fusine) | 2.280 |
| 2 | Bretto di Mezzo | 1.000 |
| 3 | Bretto di Sotto | .360 |
| 4 | Doblari | 36.000 |
| 5 | Macrasca | .478 |
| 6 | Piedimelze | .250 |
| 7 | Plava | 15.000 |
| 8 | Plusina | 1.000 |
| 9 | Poggio Tersarmata Sup. (Sagrado) | .336 |
| 10 | Straccis | 3.379 |
| | Total for HYDRO STATIONS | 70.083 KW |

Steam Stations of Electricity as of 1941

| | | |
|---|---|---|
| 1 | Piedmonte del Calvario | 1.500 |
| | GRAND TOTAL FOR STATIONS | 71.583 KW |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| No. | NAME OF STATION | KW of A.C. INSTALLED |
|---|---|---|
| 1 | Aidussina (Storie delle Fusine) | 2.280 |
| 2 | Bretto di Mezzo | 1.000 |
| 3 | Bretto di Sotto | .360 |
| 4 | Doblari | 36.000 |
| 5 | Macragoa | .478 |
| 6 | Piedimelze | .250 |
| 7 | Plava | 15.000 |
| 8 | Plusina | 1.000 |
| 9 | Poggio Terzarmata Sup. (Sagrado) | .336 |
| 10 | Straccis | 3.379 |
| | Total for HYDRO STATIONS | 70.083 KW |

Steam Stations of Electricity as of 1941

| | | |
|---|---|---|
| 1 | Piedmonte del Calvario | 1.500 |
| | GRAND TOTAL FOR STATIONS | 71.583 KW |

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Declassified E.O. 12356 Section 3.3/NND No. 785019

VENEZIA REGION A.M.G.

[redacted] - FORM E 3. (Return original copy to Regional Engineer File No

Complete this questionaire and return in duplicate [redacted] within three days.
(Questionario da riempire e restituire in doppia [redacted] copia entro tre giorni).

# PUBBLIC UTILITIES (Servizi Tecnici)

1. Utility (Servizi) i. e. (cioè): Water (Acqua), Electricity (Elettricità), ecc.

2. Name and address of Utility (Nome e ubicazione del servizio)

3. Name location of each plant and title of head official?
(Nome, indirizzo e titolo del capo di ciascun impianto?)

4. Is each plant working NOW or NOT? (L'impianto si trova ora o NON?)

5. Estimated time to get essential minimum working? days (giorni)
(Tempo che si presume necessario per iniziare il minimo di esercizio)

6. Output (Produzione): a. Normal (Normale)
b. Now (Attuale?)
c. Estimated after 30 days (Presumibile entro trenta giorni?)

7. Area served (Zona servito?)

8. Use of output (uso della produzione?)

9. Type of plant and brief description stating age and condition?
(Tipo dell'impianto e breve descrizione dell'età e condizione?)

N. B. - Attach report on damage and proposals for part or complete restoration giving appron cost
(Allegate proposte per la restaurazione parziale o completa, date il costo approssimativo)

10. Is staff available for operation (avete personale specializzato per l'esercizio?)

11. Are tools available (Avete disponibili gli attrezzi?)

12. What repair shops are available (Quale officine di riparazione avete disponibili?)

13. Are funds available (Avete fondi disponibili?) Additional rebuired (Quantità in più necessario)

| | | | | | |
|---|---|---|---|---|---|
| 14. Types of fuel and lubricants used (Tipo dei combustibili e lubrificanti usati) | | | | | |
| Quantity on hand (Quantità in deposito) | | | | | |

Declassified E.O. 12356 Section 3.3/NND No. 785019

4. Is each plant working NOW or NOT? (L'impianto si trova ora o NON?)

5. Estimated time to get essential minimum working? days (giorni)
(Tempo che si presume necessario per iniziare il minimo di esercizio)

6. **Output (Produzione):** a. Normal (Normale)
b. Now (Attuale?)
c. Estimated after 30 days (Presumibile entro trenta giorni?)

7. Area served (Zona servito?)

8. Use of output (uso della produzione?)

9. Type of plant and brief description stating age and condition?
(Tipo dell'impianto e breve descrizione dell'età e condizione?)

N. B. - Attach report on damage and proposals for part or complete restoration giving appron cost
(Allegate proposte per la restaurazione parziale o completa, date il costo approssimativo)

10. Is staff available for operation (avete personale specializzato per l'esercizio?)

11. Are tools available (Avete disponibili gli attrezzi?)

12. What repair shops are available (Quale officine di riparazione avete disponibili?)

13. Are funds available (Avete fondi disponibili?) Additional rebuired (Quantità in più necessario)

| | | | | | |
|---|---|---|---|---|---|
| 14. Types of fuel and lubricants used (Tipo dei combustibili e lubrificanti usati) | | | | | |
| Quantity on hand (Quantità in deposito) | | | | | |
| Quantity required for each month of operation (Quantità richiesta per ogni mese di esercizio) | | | | | |

15. Number of maps attached (Numero delle carte topografiche e disegni allegati?)

16. Give on back list of stores and materials required to start operation.
(Allegate a tergo le scorte ed i materiali necessari per iniziare).

17. Attach list of spare parts, machines, and materials available also other usetul information. 5769
(Allegate una lista dei pezzi e macchine e materiali disponibili ed ogni altra informazione utile).

Date (Data) _____ Signature (Firma) _____
Appointment (Titolo) _____

TIP. A. DE VITO - TEL. 27338

Declassified E.O. 12356 Section 3.3/NND No. 785019

05921

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

# WEEKLY ELECTRICITY REPORT

Name of Station _____

Name of Company or System _____

Present Capacity of Station _____ KW.

Hydro _____ Head in cu m. _____

Steam _____ Fuel _____

Diesel _____

Gas _____

| DATE | | KWHrs x $10^1$ Generated | Hours of Operation | Tons of Fuel | KW x $10^1$ Demand | Hour of Demand |
|---|---|---|---|---|---|---|
| Sun | | | | | | |
| Mon | | | | | | |
| Tue | | | | | | |
| Wed | | | | | | |
| Thu | | | | | | |
| Fri | | | | | | |
| Sat | | | | | | |
| TOTAL | | | | | | |

NOTES :

Name 5768

Date 1944

Appendix "L"

## APPLICATION FOR SUPPLY OF ELECTRICITY FOR CIVILIAN PURPOSES IN AMG TERRITORY

1. Application for a supply of electricity for civilian purposes within the AMG territory should in all cases be made to the local office of the Electricity Supply Company.

2. Electricity Supply Companies will submit weekly a list of all applications for electricity to the AMG Provincial Commissioner within whose area request is made.

3. Provincial Commissioner will, after making his recommendations forward the list to the Regional Engineer for the attention of the Regional Electrical Officer.

4. Regional Engineer will circulate the list of applications to all Divisions of the Regional HQ for comments. He will determine order of priority based on comments submitted and forward the list to the appropriate military authority. (Where doubt exists concerning priority, the matter will be referred to the Regional Commissioner.)

5. The Military Authority will return the list of applications to the Regional Engineer stating the amount of power that can be made available.

6. The Regional Engineer before requesting the Military Authority to ask the Power Company to make the power available, will, if the whole of the demands are not met, submit the list to the Divisions of Regional HQ for final comments.

Declassified E.O. 12356 Section 3.3/NND No. 785019

all applications for electricity to the AMG Provincial Commissioner within whose area request is made.

3. Provincial Commissioner will, after making his recommendations forward the list to the Regional Engineer for the attention of the Regional Electrical Officer.

4. Regional Engineer will circulate the list of applications to all Divisions of the Regional HQ for comments. He will determine order of priority based on comments submitted and forward the list to the appropriate military authority. (Where doubt exists concerning priority, the matter will be referred to the Regional Commissioner.)

5. The Military Authority will return the list of applications to the Regional Engineer stating the amount of power that can be made available.

6. The Regional Engineer before requesting the Military Authority to ask the Power Company to make the power available, will, if the whole of the demands are not met, submit the list to the Divisions of Regional HQ for final comments.



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Declassified E.O. 12356 Section 3.3/NND No. 785019

JWLB/jam

HEADQUARTERS
VENEZIA REGION
Allied Military Government
APO 394
Public Works & Utilities Division

3 April 1945

TO :

SUBJECT: Applications for Supply of Electricity for civilian purposes, in A.M.G. Territory.

FILE No: RXII/PWU/702

1. Applications for a supply of Electricity for civilian purposes, (domestic and industrial), within the A.M.G. territory will, in all cases, be made to the local office of the electricit, supply company.
A suggested form of application is attached hereto.

2. The electricity supply company will provisionally "screen" each application and will submit weekly, to the Provincial Commissioner, a list of applications received, together with any remarks. Attached is recommended form to be used.

3. The lists will contain the following particulars:-

(a) Name and address of consumer.
(b) Type of business.
(c) Estimated demand in K.W.
(d) Estimated K.W.H. demand per month.
(e) Date from which Power required.
(f) Hours of operation by day. (Give approximate starting and stopping time.)
(g) Can Industry operate off Peak Hours (i.e. 2200 to 0600 hrs?) This IMPORTANT.
(h) Remarks.

4. The Provincial Commissioner, after making his recommendations, will forward the list to the Regional Electrical Officer who will request the appropriate military authority to make the power available, and to inform the Power Company accordingly.

W. KNIGHT, Major
Regional Engineer

5766

Declassified E.O. 12356 Section 3.3/NND No. 785019

Form E. 9
Mod. E. 9

JOB: Jam

APPLICATION FOR RESTORATION OF ELECTRICAL ENERGY
(Domanda per il ripristino di energia elettrica)

ALL USERS
(Tutti gli Consumator

Application for restoration of Electric Light/Power in the following premises:
(Domanda per il ripristino di corrente/energia elettrica negli stabili seguenti:)

Name & Address of Consumer _____
(Nome & Indirizzo del Consumatore)

Type of Business _____
(Tipo di occupazione)

H.P. of Motors Installed _____
(Forza Cavallo dei motori installati)

Max. Load _____ K.W. _____ K.W.H. Monthly _____
(Carico Massimo) (K.W.) (K.W.H. Mensile)

Number of months Power required _____
(Numero di mesi che l'energia occore)

Date from which Power is required _____
(Data da quando l'energia occore)

Hours of operation: From _____ To _____ Peak _____
Orario di operazione) da a Punto

Can Industry operate off peak hours (between 2200 & 0600 hrs?) _____
(Puo operare l'industria durante l'ore 2200 e 0600?)

Total _____
(Totale)

Partial _____ From _____ To _____
(Parziale) (da) (a)

If not, give reasons: _____
(Si non é possible, dati la ragione)

Signature _____
(Firma)

5765

05971

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
VENEZIE REGION.
ALLIED MILITARY GOVERNMENT.
APO 394.

12 April 1945

SUBJECT: Estimated Power Requirements for Industry in North Italy. Ref: RX11/IND.

To: Industry Sub Commission, ACHQ. (13)

15

1. Your AC/5628/Ind. dated 5 April, 1945, has been discussed with Public Works and Utilities, Venezie Region and others interested. It is considered that insufficient data are available from which to produce a return that would be of any value.

2. It would appear that quantity of power available, extent of restoration of power facilities required, as well as the state of the industries requiring power, their physical condition upon occupation, the position of raw materials and other requirements for operation, fuel, skilled and unskilled operatives present so many unknowns that a reasonable forecast is impossible.

3. Capt. Butcher of Public Works and Utilities, Venezie Region will confer with his SubCommission and with you during the next few days concerning this matter.

RECEIVED
P.W. & U. S/C A.C.
14 APR 1945 197

S. W. Archibald, Lt. Col. R.C.E
Industry Officer,
Venezie Region;

Copy to Public Works and Utilities;
Venezie Region, with att. AC/5628/Ind.

File 2.

col Kapper

5764

Declassified E.O. 12356 Section 3.3/NND No. 785019

SECRET

(file 97)

14

Inter office memo.

5 Apr. 45

Ref. 21-3/18/FOOD

Subject : Power Requirements

From : Food Sub. Commission

To : PWV. Sub. Commission

Handed to Electrical Division

W. L. [illegible]
Colonel.

Declassified E.O. 12356 Section 3.3/NND No. 785019

To: P.W. + U. Sec. 13

RECEIVED
P.W. & U. S/C A.C.
8 APR 1945 (9)

HEADQUARTERS ALLIED COMMISSION
APO 394
INDUSTRY SUB-COMMISSION

DBR/dg

Tel. 447

5 April 1945

Ref. AC/5628/IND

SUBJECT : Estimated power requirements for Industry in North Italy.

TO : Regional Commissioner Venezia Region
(Attn.: Industry Officer)

1. Public Works and Utilities Sub-Commission are preparing plans for distribution of available power, and restoration of power facilities for areas now in, or North of, the present combat zone in Italy.

2. An estimate is wanted of the prospective requirements for industrial purposes by provinces, in kilowatts of load and kilowatt hours per month of consumption for each of the first six months following occupation. Estimates for the second three months of this period may be omitted if it is felt that they will be too unreliable. These figures should be given for general classes of industries. A partial, sample, tabulated form, which need not be followed rigorously, is as follows:

| INDUSTRY | VENEZIA REGION - TREVISO PROVINCE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Mo | | 2d Mo | | 3rd Mo | | 4th Mo | | 5th Mo | | 6 Mo | |
| | kw | kwh | kw | kwh | kw | kwh | | | | | | |
| Leather | | | | | | | | | | | | |
| Mining and Quarrying | | | | | | | | | | | | |
| Textile | | | | | | | | | | | | |
| Cement | | | | | | | | | | | | |
| Automotive | | | | | | | | | | | | |
| Building Materials (other) | | | | | | | | | | | | |
| Chemical | | | | | | | | | | | | |
| ..Fd..... | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |

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15 rulers

Declassified E.O. 12356 Section 3.3/NND No. 785019

3. It is evident that no high order of detailed accuracy is expected in making this estimate. These data will aid Public Works and Utilities Sub-Commission in allocation of reconstruction activities, and such imported facilities as may be made available. In turn, Public Works and Utilities Sub-Commission can work more effectively toward supplying power to critical industries by areas.

4. This estimate should be completed by 9 April, if possible. The first return may be later amended as better information becomes available or as plans and policies may be altered.

By command of Rear Admiral STONE:

(signed)

W. J. KELSHALL, LT. COL.
for
W.S. VAUGHAN
Director,
Industry Sub-Commission.

Copy to:
P.W. & U. S/C
(Attn.: Lt.Col. Parker)
File-5695

Declassified E.O. 12356 Section 3.3/NND No. 785019

To. PW +DV. Sec. 12

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P.W. & U. S/C A.C.
18 APR 1945 197

HEADQUARTERS ALLIED COMMISSION
APO 394
INDUSTRY SUB-COMMISSION

DDH/fl.

Tel. 447

Ref. AC/5628/IND

4 April 1945

SUBJECT : Estimated power requirements for Industry in North Italy.

TO : Regional Commissioner Emilia Region
(Attn.: Industry Officer)

1. Public Works and Utilities Sub-Commission are preparing plans for distribution of available power, and restoration of power facilities for areas now in, or North of, the present combat zone in Italy.

2. An estimate is wanted of the prospective requirements for industrial purposes by provinces, in Kilowatts of load and kilowatt hours per month of consumption for each of the first six months following occupation. Estimates for the second three months of this period may be omitted if it is felt that they will be too unreliable. These figures should be given for general classes of industries. A partial, sample, tabulated form, which need not be followed rigorously, is as follows :

| INDUSTRY | EMILIA REGION - PARMA PROVINCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1st Mo | | 2nd Mo | | 3rd Mo | | 4th Mo | 5th Mo | 6th Mo |
| Leather | Kw | Kwh | Kw | Kwh | Kw | Kwh | | | |
| Mining and Quarrying | | | | | | | | | |
| Textile | | | | | | | | | |
| Cement | | | | | | | | | |
| Automotive | | | | | | | | | |
| Building Materials (other) | | | | | | | | | |
| Chemical | | | | | | | | | |
| ..... | | | | | | | | | |
| ..... | | | | | | | | | |
| ..... | | | | | | | | | |

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Declassified E.O. 12356 Section 3.3/NND No. 785019

3. It is evident that no high order of detailed accuracy is expected in making this estimate. These data will aid Public Works and Utilities Sub-Commission in allocation of reconstruction activities, and such imported facilities as may be made available. In turn, Public Works and Utilities Sub-Commission can work more effectively toward supplying power to critical industries by areas.

4. This estimate should be completed by 9 April, if possible. The first return may be later amended as better information becomes available or as plans and policies may be altered.

By command of Rear Admiral ATHERTON:

(signed)

W. J. MASKREY, LT. COL.
for
W.W. VAUGHAN
Director,
Industry Sub-Commission

Copy to:-
P.W. & U. S/C ✓
(Attn. Lt.Col. Parker)
File-per

06031

Declassified E.O. 12356 Section 3.3/NND No. 785019

To: P.W. & V. Sec.

P.W. & V. Sec. A.C.
26 APR 1945 197

HEADQUARTERS ALLIED COMMISSION
APO 394
INDUSTRY SUB-COMMISSION

DHR/ag

4 April 1945

Tel. 447

Ref. AC/5628/IND.

SUBJECT : Estimated power requirements for Industry in North Italy.

TO : Regional Commissioner Piemonte Region (Attn.: Industry Officer)

1. Public Works and Utilities Sub-Commission are preparing plans for distribution of available power, and restoration of power facilities for areas now in, or North of, the present combat zone in Italy.

2. An estimate is wanted of the prospective requirements for industrial purposes by provinces, in kilowatts of load and kilowatt hours per month of consumption for each of the first six months following occupation. Estimates for the second three months of this period may be omitted if it is felt that they will be too unreliable. These figures should be given for general classes of industries. A partial, sample, tabulated form, which need not be followed rigorously, is as follows :

| INDUSTRY | PIEMONTE REGION – TORINO PROVINCE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Mo | | 2d Mo | | 3rd Mo | | 4th Mo | | 5th Mo | | 6 Mo | |
| | KW | KWh | KW | KWh | KW | KWh | | | | | | |
| Leather | | | | | | | | | | | | |
| Mining and Quarrying | | | | | | | | | | | | |
| Textile | | | | | | | | | | | | |
| Cement | | | | | | | | | | | | |
| Automotive | | | | | | | | | | | | |
| Building Materials (other) | | | | | | | | | | | | |
| Chemical | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |

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0 6 0 4

Declassified E.O. 12356 Section 3.3/NND No. 785019

3. It is evident that no high order of detailed accuracy is expected in making this estimate. These data will aid Public Works and Utilities Sub-Commission in allocation of reconstruction activities, and such imported facilities as may be made available. In turn, Public Works and Utilities Sub-Commission can work more effectively toward supplying power to critical industries by areas.

4. This estimate should be completed by 8 April, if possible. The first return may be later amended as better information becomes available or as plans and policies may be altered.

By command of Rear Admiral STONE :

(signed)

W. J. MASKREY, LT. COL.
for W. S. VAUGHAN
Director,
Industry Sub-Commission.

Copy to :
P.W. & U. S/C
(Attn.: Lt. Col. Parker)
~~File 5005~~

0605

Declassified E.O. 12356 Section 3.3/NND No. 785019

RECEIVED
P.W.B. U. S/C A.C.
28 APR 1945 (9)

O To: P W.B LO Sec. 10

HEADQUARTERS ALLIED COMMISSION
APO 394
INDUSTRY SUB-COMMISSION

DDR/ag

Tel. 447

5 April 1945

Ref. AC/5628/IND.

SUBJECT : Estimated Power Requirements for Industry in North Italy.

TO : Regional Commissioner Lombardia Region.
(Attn.: Industry officer)

1. Public Works and Utilities Sub-Commission are preparing plans for distribution of available power, and restoration of power facilities for areas now in, or North of, the present combat zone in Italy.

2. An estimate is wanted of the prospective requirements for industrial purposes by provinces, in kilowatts of load and kilowatt hours per month of consumption for each of the first six months following occupation. Estimates for the second three months of this period may be omitted if it is felt that they will be too unreliable. These figures should be given for general classes of industries. A partial, sample, tabulated form, which need not be followed rigorously, is as follows :

| INDUSTRY | LOMBARDIA REGION – BRESCIA PROVINCE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Mo | | 2d Mo | | 3rd Mo | | 4th Mo | | 5th Mo | | 6 Mo | |
| | kw | kwh | kw | kwh | kw | kwh | | | | | | |
| Leather | | | | | | | | | | | | |
| Mining and quarrying | | | | | | | | | | | | |
| Textile | | | | | | | | | | | | |
| Cement | | | | | | | | | | | | |
| Automotive | | | | | | | | | | | | |
| Building Materials (other) | | | | | | | | | | | | |
| Chemical | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |
| ..... | | | | | | | | | | | | |

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3. It is evident that no high order of detailed accuracy is expected in making this estimate. These data will aid Public Works and Utilities Sub-Commission in allocation of reconstruction activities, and such imported facilities as may be made available. In turn, Public Works and Utilities Sub-Commission can work more effectively toward supplying power to critical industries by areas.

4. This estimate should be completed by 9 April, if possible. The first return may be later amended as better information becomes available or as plans and policies may be altered.

By command of Rear Admiral STONE :

(signed)

W. J. MASKREY, LT. COL.
for W. S. VAUGHAN
Director,
Industry Sub-Commission.

Copy to :
P.W. & U. S/C
(Attn.: Lt.Col. Parker)
~~File 5005~~

0607

Declassified E.O. 12356 Section 3.3/NND No. 785019

To: P.W. + U S/C.

RECEIVED
P.W. & U. S/C A.C.
6 APR 19..

HEADQUARTERS ALLIED COMMISSION
APO 394
INDUSTRY SUB-COMMISSION

DER/ma.

Tel. 447

Ref. AS/5628/IND

4 April 1945

SUBJECT : Estimated power requirements for Industry in North Italy.

TO : Regional Commissioner Liguria Region (Attn.: Industry Officer)

1. Public Works and Utilities Sub-Commission are preparing plans for distribution of available power, and restoration of power facilities for areas now in, or North of, the present combat zone in Italy.

2. An estimate is wanted of the prospective requirements for industrial purpose by provinces, in kilowatts of load and kilowatt hours per month of consumption for each of the first six months following occupation. Estimates for the second three months of this period may be omitted if it is felt that they will be too unreliable. These figures should be given for general classes of industries. A partial, sample, tabulated form, which need not be followed rigorously, is as follows :

| INDUSTRY | LIGURIA REGION - SAVONA PROVINCE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1st Mo | | 2nd Mo | | 3rd Mo | | 4th Mo | 5th Mo | 6th Mo |
| | kw | kwh | kw | kwh | kw | kwh | | | |
| Leather | | | | | | | | | |
| Mining and Quarrying | | | | | | | | | |
| Textile | | | | | | | | | |
| Cement | | | | | | | | | |
| Automotive | | | | | | | | | |
| Building Materials (other) | | | | | | | | | |
| Chemical | | | | | | | | | |
| ..... | | | | | | | | | |
| ..... | | | | | | | | | |
| ..... | | | | | | | | | |

3. It is evident that no high order of detailed accuracy is expected in making this estimate. These data will aid Public Works and Utilities Sub-Commission in allocation of reconstruction activities, and

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Declassified E.O. 12356 Section 3.3/NND No. 785019

such imported facilities as may be made available. In turn, Public Works and Utilities Sub-Commission can work more effectively toward supplying power to critical industries by areas.

4. This estimate should be completed by 9 April, if possible. The first return may be later amended as better information becomes available or as plans and policies may be altered.

By Command of Rear Admiral STONE :

(signed)

W. J. MASKREY, LT. COL.
for
W. S. VAUGHAN,
Director,
Industry Sub-Commission

Copy to :-
P.W. & U. S/C
(Attn.; Lt.Col.Parker)
File 5695

Declassified E.O. 12356 Section 3.3/NND No. 785019

06091

No. 317 HEADQUARTERS ALLIED COMMISSION WRL/ac

INTER OFFICE MEMO

Reference : 197/PWU
Subject : Electricity Northern Italy 29 March 45
To : FOOD SUB-COMMISSION (Att Lt.D.C.Berizzi)
AGRICULTURE SUB-COMMISSION (Att Mr.J.S.Heiser)
INDUSTRY SUB-COMMISSION (Att Major W.E.Wydenes)
TRANSPORTATION SUB-COMMISSION (Att Duthie and Lt.R.C.Bowie)
From : Public Works and Utilities Sub-Commission

1) - With reference to memorandum this office dated 12 March 1945, subject "Electricity Northern Italy" and the meeting which was held on 14 March 1945, it is proposed to hold a second meeting for the purpose of discussing the electric power needs in Northern Italy upon liberation.

2) - It is requested that a representative from your Sub-Commission be present at this meeting with information giving the approximate amount of electric power for your monthly needs for the first three months after liberation and the approximate locations where such needs will exist.

3) - Confirming telephone conversation by Lt.Col.Parker of this Division, the meeting will be held in Room 16, 8th floor at 1400 hours on Friday 30 March 1945.

W.M.LAPNER
Lieut-Colonel.
Chief Elec.Div.

cc : Lt.Col.Parker
Major Berry
" Renton
" Price
" Laughlin

5753

Declassified E.O. 12356 Section 3.3/NND No. 785019

RECEIVED
P.W. & U. U.S.A.
16 MAR 1945 197

HEADQUARTERS ALLIED COMMISSION
APO 394
INDUSTRY SUB-COMMISSION DG/dg

Tel. 447 15 March 1945

Ref. AC/3577/IND

SUBJECT: Electric Power

TO : Distribution Below

1. Attached for your information is a copy of study "Electric Power and Electric Industry in Lombardia" prepared by this Sub-Commission HQ. AC.

For the Chief Commissioner:

for W.S. VAUGHAN
Director,
Industry Sub-Commission

DISTRIBUTION:

Regional Commissioner
Lombardia Region
~~Public Works, Navy, AAF~~
Public Works & Utilities
S/C HQ. AC.
~~Ministry, Industry Commerce & Labour.~~

1 Incl.
as per para 1 above

Lt Col Lapper
D.A.G. 16/3

5751

GAV/bh

WF14

Allied Commission
INDUSTRY
Sub Commission

# ELECTRIC POWER AND ELECTRIC INDUSTRY IN LOMBARDIA

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3) Electric energy ..... " 2
4) Electric energy utilisation ..... " 2
5) Monthly rating of electric energy and power ..... " 3
6) List of electric plants in Lombardia ..... " 5
7) Transformer substations ..... " 5
8) Transmission lines ..... " 6
9) Map of the electric system ..... " 6
10) Corporate Organisation ..... " 6
11) Manufacturers of electric apparatus and materials ..... " 7


Rome the 5th October 1944

ING. GIUSEPPE D'AYALA VALVA


Declassified E.O. 12356 Section 3.3/NND No. 785019

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4) Electric energy utilisation ..... " 3
5) Monthly rating of electric energy and power ..... " 3
6) List of electric plants in Lombardia ..... " 3
7) Transformer substations ..... " 5
8) Transmission lines ..... " 6
9) Map of the electric system ..... " 6
10) Corporate Organisation ..... " 6
11) Manufacturers of electric apparatus and materials ..... " 7


Rome the 5th October 1944

ING. GIUSEPPE D'AYALA VALVA

~~Enclosed 1 map~~

5750


Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

## ELECTRIC POWER AND ELECTRIC INDUSTRY IN LOMBARDIA

1) General - The present report aims to summarize the electric activity of Lombardia both in the production and distribution of electric power and in the manufacture of electric materials.
The following information is referred to the end of 1961.
The details concerning the capacity and output of electric plants are extended to the other areas of Northern Italy for a more complete evaluation.

2) Electric Power -

Table I (Electric plants in Northern Italy)

| Compartment | Number of Electric Plants | | Electric Power | | Total | |
|---|---|---|---|---|---|---|
| | Hydroelectric | Thermoelectric | Hydroelectric Kw. | Thermoelectric Kw. | No. | Kw. |
| Piemonte | 254 | 29 | 1.374.695 | 77.129 | 283 | 1.451.818 |
| Lombardia | 322 | 94 | 1.838.502 | 148.120 | 358 | 1.376.829 |
| Venezia | 257 | 40 | 1.231.719 | 106.300 | 297 | 1.338.028 |
| Liguria | 24 | 10 | 62.185 | 143.350 | 34 | 205.535 |
| Emilia | 48 | 17 | 229.004 | 44.235 | 65 | 273.239 |
| | 845 | 190 | 4.152.093 | 519.284 | 975 | 4.645.377 |

Table II (Classification of the hydroelectric plants)

| Compartment | Hydroelectric Plants | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | greater than 15000 KW | fr.5001 KW to 15000 " | fr.1001 KW to 5000 " | fr. 501 KW to 1000 " | fr. 301 KW to 500 " | below 300 KW | |
| Piemonte | 20 | 23 | 63 | 50 | 35 | 63 | 254 |
| Lombardia | 19 | 29 | 48 | 49 | 19 | 58 | 322 |
| Venezia | 29 | 15 | 34 | 47 | 33 | 100 | 257 |
| Liguria | - | 0 | 4 | 7 | 1 | 6 | 24 |
| Emilia | 3 | 5 | 13 | 2 | 8 | 17 | 48 |
| | 71 | 82 | 162 | 156 | 96 | 278 | 845 |

Table III (Classification of the thermoelectric plants)

| Compartment | Thermoelectric Plants | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | beyond | fr.8001 KW | fr.1601 KW | fr. 801 KW | fr. 301 KW | below | |

| Compartment | Number of Electric Plants | | Electric Power | | Total | |
|---|---|---|---|---|---|---|
| | Hydroelectric | Thermoelectric | Hydroelectric Kw. | Thermoelectric Kw. | No. | Kw. |
| Piemonte | 804 | 29 | 1.374.606 | 77.130 | 823 | 1.451.816 |
| Lombardia | 228 | 34 | 1.708.508 | 148.120 | 856 | 1.878.629 |
| Venezia | 257 | 40 | 1.231.719 | 106.309 | 297 | 1.338.028 |
| Liguria | 34 | 10 | 62.185 | 143.500 | 34 | 205.685 |
| Emilia | 48 | 17 | 323.004 | 54.235 | 65 | 373.239 |
| | 845 | 130 | 4.198.022 | 519.354 | 975 | 4.845.377 |

Table II (Classification of the hydroelectric plants)

| Compartment | Hydroelectric Plants | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | greater than 15000 Kw | fr.5001 Kw to 15000 " | fr.1001 Kw to 5000 " | fr. 501 Kw to 1000 " | fr. 301 Kw to 500 " | below 300 Kw | |
| Piemonte | 29 | 28 | 69 | 50 | 32 | 62 | 294 |
| Lombardia | 19 | 20 | 49 | 40 | 19 | 65 | 228 |
| Venezia | 20 | 16 | 34 | 47 | 32 | 108 | 257 |
| Liguria | - | 6 | 4 | 7 | 1 | 6 | 34 |
| Emilia | 3 | 8 | 12 | 2 | 6 | 17 | 48 |
| | 71 | 88 | 168 | 156 | 90 | 278 | 845 |

Table III (Classification of the thermoelectric plants)

| Compartment | Thermoelectric Plants | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | beyond 15000 Kw | fr.5001 Kw to 15000 " | fr.1001 Kw to 5000 " | fr. 501 Kw to 1000 " | fr. 301 Kw to 500 " | below 300 Kw | |
| Piemonte | 2 | 2 | 8 | 5 | 4 | 8 | 29 |
| Lombardia | 4 | 2 | 6 | 10 | 2 | 2 | 34 |
| Venezia | 1 | 1 | 14 | 19 | 5 | 0 | 40 |
| Liguria | 4 | 1 | 3 | 1 | - | 1 | 10 |
| Emilia | 1 | - | 8 | 1 | 2 | 3 | 17 |
| | 12 | 7 | 39 | 37 | 13 | 32 | 130 |

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3) Electric energy -

Table IV (Electric output and utilization hours of Electric Plants)

| Compartment | Hydroelectric Plants | | Thermoelectric Plants | | Total Millions of KWh |
|---|---|---|---|---|---|
| | Millions of KWh | Yearly Utilization hours | Millions of KWh | Yearly Utilization hours | |
| Piemonte | 4.711,8 | 3429 | 34,8 | 461 | 4.746,6 |
| Lombardia | 4.284,2 | 3487 | 72,2 | 487 | 4.356,4 |
| Venezia | 4.323,2 | 3672 | 40,9 | 385 | 4.363,1 |
| Liguria | 284,0 | 3280 | 37,7 | 611 | 291,7 |
| Emilia | 384,6 | 1579 | 6,1 | 138 | 390,8 |
| | 14.103,7 | | 241,7 | | 14.348,4 |

Table V - Gives the figures of the specific electric output per inhabitant and per square kilometer for the compartments of Northern Italy.

| Compartment | Total electric Output millions of KWh | Population | KWh. per inhabitant | Area square kilometers | KWh. per sq. kilometer |
|---|---|---|---|---|---|
| Piemonte | 4.746,6 | 3.405.080 | 1.337,7 | 29.350,51 | 161,688 |
| Lombardia | 4.356,4 | 5.742.574 | 758,6 | 22.791,21 | 189,110 |
| Venezia | 4.363,1 | 5.635.908 | 772,6 | 48.088,56 | 88,994 |
| Liguria | 291,7 | 1.468.454 | 198,6 | 5.435,52 | 55,666 |
| Emilia | 390,6 | 3.294.305 | 118,9 | 22.135,96 | 17,646 |
| | 14.348,4 | 19.897.311 | 721,1 | 126.807,68 | 111,396 |

4) Electric energy utilization - Complete statistics of the electric energy are not available - Table VI gives the available figures grouped under the leading classes of industries. An identical subdivision appears however permitted for the remaining energy (2.478 millions KWh- as supposed in the report "Electric power in Italy - Page 5).

Table VI (Electric energy utilization in millions of KWh)

| Compartment | Heating and Light | Traction | Motive Power | Chemical and Metallurgical Industries | Electric Energy of known Utilization |
|---|---|---|---|---|---|
| Piemonte | 245,8 + | 238,2 + | 1.157,3 + | 1.858,5 = | 3.503,8 |
| Lombardia | 418,8 + | 402,4 + | 1.824,3 + | 2.710,2 = | 5.355,7 |

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| | | | | | |
|---|---|---|---|---|---|
| | 14.186,7 | | 241,7 | | 14.648,4 |

Table V - Gives the figures of the specific electric output per inhabitant and per square kilometer for the compartments of Northern Italy.

| Compartment | Total electric Output millions of KWh | Population | KWh. per inhabitant | Area square kilometers | KWh. per sq. kilometer |
|---|---|---|---|---|---|
| Piemonte | 4.710,6 | 3.495.960 | 1.337,7 | 29.358,51 | 161,038 |
| Lombardia | 4.356,4 | 5.742.574 | 758,6 | 23.791,21 | 183,110 |
| Venezia | 4.863,1 | 5.005.895 | 772,6 | 46.088,56 | 88,694 |
| Liguria | 291,7 | 1.468.454 | 198,6 | 5.435,52 | 53,666 |
| Emilia | 390,6 | 3.294.305 | 118,9 | 22.135,88 | 17,646 |
| | 14.348,4 | 19.807.211 | 721,1 | 128.807,68 | 111,390 |

4) Electric energy utilization - Complete statistics of the electric energy are not available - Table VI gives the available figures grouped under the leading classes of industries. An identical subdivision appears however permitted for the remaining energy (2.478 millions KWh- as supposed in the report "Electric power in Italy - Page 5).

Table VI (Electric energy utilization in millions of KWh)

| Compartment | Heating and Light | Traction | Motive Power | Chemical and Metallurgical Industries | Electric Energy of known Utilization |
|---|---|---|---|---|---|
| Piemonte | 345,8 + | 338,2 + | 1.157,3 + | 1.855,2 = | 3.696,3 |
| Lombardia | 418,2 + | 427,4 + | 1.894,1 + | 1.512,8 = | 4.252,3 |
| Venezia | 276,6 + | 282,4 + | 992,1 + | 1.869,7 = | 3.331,8 |
| Liguria | 41,2 + | 44,2 + | 178,4 + | 182,6 = | 446,4 |
| Emilia | 28,9 + | 49,3 + | 201,8 + | 4,3 = | 284,3 |
| | 1.009,9 + | 1.021,5 + | 4.423,7 + | 5.415,4 = | 11.870,5 |

It is to be pointed out that the electric energy consumed in the group of compartments Piemonte - Lombardia - Liguria (Lombardia cannot be isolated) is higher than the energy produced (9.394,7 millions KWh.) by 220,3 millions of KWh., that as a result of the exchange of electric energy among the bordering compartments (there being included Switzerland that yearly exports 237,9 millions of KWh. in Italy.

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5) Monthly rating of electric energy and power - Table VII gives a measure of the monthly utilization of the electric plants in Lombardia.

Table VII (Monthly rating of electric energy in 1000 KWh.)

| Electric Plants | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hydroelectric Plants | 306.[illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Thermoelectric Plants | 14.[illegible] | 14.[illegible] | 6.[illegible] | 5.[illegible] | 2.[illegible] | 2.[illegible] | 2.[illegible] | 2.[illegible] | 3.[illegible] | 3.[illegible] | 6.[illegible] | 9.[illegible] |

The total yearly amount of electric energy for the hydroelectric plants is
4.[illegible].176 KWH
The total yearly amount of electric energy for the thermoelectric plants is
72.[illegible]. KWH

Table VIII (Monthly maximum rating of electric power in KW)

| Electric Plants | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hydroelectric Plants | 940.[illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Thermoelectric Plants | 57.[illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

The maximum peak load in a year for hydroelectric plants is 1.110.[illegible] KW
" " " " " " " " Thermoelectric " " [illegible].000 KW

Though the above maximum loads may not be contemporary, it may be said that:
- for the hydroelectric plants the utilization factor assumed as the ratio of the maximum load in the year (1.110.[illegible] KW.) to the available power (1.[illegible].[illegible] KW) is satisfactorily high: 0,90 (against 0,87for the whole hydroelectric system in Italy). In the assumption that the whole power be exploited once a year at least, the difference 0,10 (1.00-0.90) may be assumed as the reserve power.
- For the thermoelectric plants the analogue factor for Lombardia is 0.41 (against 0,48 of the whole thermoelectric system in Italy), the above low figures depending on the supplementary function of the thermoelectric plants in Italy (See: Report "Electric power in Italy"-Page 2). That must be borne in mind that when the Hydroelectric plants were damaged, a much larger part of electric power could be supplied by the thermoelectric plants, provided the fuel stocks be adequate.

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The total yearly amount of electric energy for the hydroelectric plants is
4.384.176 KWH
The total yearly amount of electric energy for the thermoelectric plants is
72.219. KWH

Table VIII (Monthly maximum rating of electric power in KW)

| Electric Plants | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hydroelectric Plants | 940.554 | 951.985 | 902.86 | 913.436 | 897.504 | 912.923 | 894.853 | 881.970 | 888.000 | 870.387 | 888.420 | 905.811 |
| Thermoelectric Plants | 57.221 | 50.800 | 14.610 | 4.820 | 4.940 | 6.210 | 5.000 | 4.910 | 3.730 | 9.700 | 21.580 | 23.910 |

The maximum peak load in a year for hydroelectric plants is 1.110.625 KW
" " " " " " " " Thermoelectric " " 60.000 KW

Though the above maximum loads may not be contemporary, it may be said that:
- for the hydroelectric plants the utilization factor assumed as the ratio of the maximum load in the year (1.110.625 KW.) to the available power (1.238.500 KW) is satisfactorily high: 0,90 (against 0,87for the whole hydroelectric system in Italy). In the assumption that the whole power be exploited once a year at least, the difference 0,10 (1.00-0.90) may be assumed as the reserve power.
- For the thermoelectric plants the analogue factor for Lombardia is 0.41 (against 0,48 of the whole thermoelectric system in Italy), the above low figures depending on the supplementary function of the thermoelectric plants in Italy (See: Report "Electric power in Italy"-Page 2). That must be borne in mind that when the Hydroelectric plants were damaged, a much larger part of electric power could be supplied by the thermoelectric plants, provided the fuel stocks be adequate.

6) Table IX - List of the main hydroelectric plants in Lombardia per province with the figures of the produced power :

| Basins and Plants | Province | Power | | Basins and Plants | Province | Power | |
|---|---|---|---|---|---|---|---|
| | | Installed | Allotted | | | Installed | Allotted |
| | | KW | HP | | | KW | HP |
| Mincio | | | | Adda | | | |
| Caserate | Brescia | 1.500 | 1.025 | Isolaccia | Sondrio | 38.250 | 10.238 |
| Garda (Toscolano) | " | 1.456 | 1.709 | Grassotto | " | 34.240 | 38.294 |

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| Basins and Plants | Province | Power Installed kW | Power Allotted kW |
|---|---|---|---|
| Volta Mantovana | Mantova | 2.975 | 3.100 |
| **Oglio** | | | |
| Temu (C) | Brescia | 47.040 | 13.895 |
| Sonico (C) | " | 69.000 | 46.168 |
| Cedegolo (E.B) | " | 8.320 | 10.359 |
| Paisco (C) | " | 8.320 | 6.807 |
| Forno Allione (C) | " | 7.440 | 6.215 |
| Salarno (C) | " | 5.625 | 1.384 |
| Campellio (C) | " | 8.000 | 6.196 |
| Isola (C) | " | 47.000 | 45.729 |
| Cedegolo (E.C) | " | 34.000 | 43.984 |
| Pallobia-Cata (E.B) | " | 5.800 | 5.634 |
| Niardo | " | 1.012 | 883 |
| Malegno | " | 2.144 | 2.945 |
| La Rocca (Borno) | " | 3.000 | 2.695 |
| Bonzo di Colere | Bergamo | 3.040 | 3.049 |
| Mezzano (C.I.B.) | Brescia | 6.975 | 6.107 |
| Mezzano (E.Bell) | " | 8.595 | 8.849 |
| Corna (Darfo) | " | 6.144 | 7.814 |
| Ariogno | " | 1.740 | 1.698 |
| Piezze di Sovere | Bergamo | 1.180 | 506 |
| Poltragno | " | 1.740 | 1.003 |
| Tinazzo | " | 2.085 | 699 |
| Tagliano | " | 3.360 | 2.720 |
| Breno | Brescia | 1.760 | 2.981 |
| Cover | " | 2.008 | 1.788 |
| Ponte Caffaro | " | 7.045 | 8.822 |
| Vobarno (E.B) | " | 29.150 | 29.791 |
| Degnone (E.B) | " | 1.040 | 813 |
| Mura (E.B) | " | 1.120 | 919 |
| Vobarno (A.F.L.) | " | 3.560 | 2.434 |
| Roè | " | 1.685 | 1.495 |
| Villanuova s/Chiese | " | 2.082 | 2.625 |
| Prevalle | " | 1.440 | 1.251 |
| Zogno (Ed) | Bergamo | 5.810 | 6.448 |
| Clusone (E.Bo) | " | 3.535 | 2.580 |
| Ponte di Sotto (E.B) | " | 5.040 | 6.144 |
| Barzo | " | 4.200 | 5.230 |
| Fara d'Adda E.Anno | " | 1.680 | 2.457 |
| Cassano d'Adda | Milano | 9.480 | 9.958 |
| Tezzi (E.I.B) | Bergamo | 20.000 | 16.578 |
| Candelino | " | 4.200 | 4.510 |

| Basins and Plants | Province | Power Installed kW | Power Allotted kW |
|---|---|---|---|
| Rasca Inf.(Grosio) | Sondrio | 23.512 | 10.200 |
| Stazzona | " | 35.200 | 16.106 |
| Peschiavino | " | 9.800 | 5.497 |
| Boffetto | " | 9.450 | 10.492 |
| Arnisa | " | 3.600 | 3.373 |
| Zappello | " | 9.000 | 1.731 |
| Vedello | " | 27.000 | 8.347 |
| Venina (Platede) | " | 35.000 | 25.902 |
| Mallero Sup. | " | 24.000 | 18.784 |
| Mallero Inf. | " | 4.800 | 3.647 |
| Sondrio | " | 2.080 | 1.344 |
| Tartano (S.I.C) | " | 7.120 | 7.978 |
| Masino | " | 5.455 | 8.807 |
| Morbegno | " | 8.350 | 8.400 |
| Gerola Alta | " | 14.250 | 3.116 |
| S.Bernardo (C) | " | 20.200 | 6.935 |
| S.Francesco (Cosa) (C) | " | 140.000 | 69.851 |
| Campo | " | 48.200 | 16.050 |
| Premana (S.O.) | Como | 1.440 | 1.455 |
| Corenno Plinio (S.O.) | " | 12.040 | 8.227 |
| Bellano (S.O.) | " | 2.835 | 3.745 |
| Senenza (Calusco (E)) | Bergamo | 3.740 | 4.858 |
| Isiede-Addio (E4) | Milano | 38.800 | 37.258 |
| Bertini-Paderno d'Adda (E4) | " | 10.000 | 12.571 |
| Trezzo d'Adda (E3) | " | 12.600 | 12.430 |
| Crespi d'Adda | Bergamo | 2.100 | 3.467 |
| Cerese | " | 21.000 | 9.100 |
| Terdogna | " | 31.800 | 33.098 |
| Leurra | " | 2.500 | 1.318 |
| S.Pietro d'Orzio | " | 9.810 | 7.099 |
| S.Giov.Bianco (S.Bo) | " | 2.200 | 1.672 |
| Serrati (S.O) | " | 1.175 | 1.015 |
| Moncaglia (S.O) | " | 1.810 | 1.174 |
| S.Pellegrino (S.O) | " | 2.580 | 2.709 |
| Noble (Corna) | " | 1.056 | 1.042 |
| Vertova (Calusio) | " | 1.180 | 945 |
| Cene ia | " | 1.200 | 930 |
| Comenduno (Cot S) | " | 2.735 | 1.981 |
| **Ticino** | | | |
| Maccagno (E.V) | Varese | 4.240 | 1.720 |
| Corrido | Como | 3.820 | 2.775 |
| Creva di Luino (E2) | Varese | 18.200 | 7.335 |

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| | | | |
|---|---|---|---|
| Malarno (C) | " | 3.625 | 1.324 |
| Campellio (C) | " | 8.000 | 6.196 |
| Isola (C) | " | 47.000 | 45.729 |
| Cedegolo (S.C) | " | 34.000 | 43.984 |
| Pallalda-Cato (E.B) | " | 5.600 | 5.534 |
| Niardo | " | 1.012 | 863 |
| Malegno | " | 2.144 | 2.345 |
| La Rocca (Borno) | " | 3.060 | 2.096 |
| Monzo di Colere | Bergamo | 2.000 | 3.043 |
| Mazzunno (C.I.B.) | Brescia | 6.975 | 8.107 |
| Mazzunno (E.Mil) | " | 8.595 | 8.919 |
| Corna (Darfo) | " | 8.144 | 7.814 |
| Artogno | " | 1.740 | 1.626 |
| Pisogne di Sovere | Bergamo | 1.100 | 598 |
| Peltragno | " | 1.740 | 1.003 |
| Tinnazzo | " | 2.085 | 609 |
| Tagliano | " | 3.260 | 2.720 |
| Brozzo | Brescia | 1.760 | 2.881 |
| Cover | " | 2.000 | 1.708 |
| Ponte Caffaro | " | 7.045 | 8.822 |
| Vobarno (E.B) | " | 22.150 | 23.781 |
| Degnone (E.B) | " | 1.040 | 812 |
| Mura (E.B) | " | 1.120 | 919 |
| Vobarno (A.F.L.) | " | 3.480 | 2.434 |
| Roè | " | 1.665 | 1.495 |
| Villanuova s/Chi | " | 2.082 | 2.025 |
| Prevalle | " | 1.440 | 1.051 |
| Zogno (Ed) | Bergamo | 5.800 | 6.448 |
| Clusezzo (S.Be) | " | 3.535 | 2.623 |
| Ponate di Sotto (S.B) | | 5.040 | 5.144 |
| Barno | " | 4.200 | 3.220 |
| Fara d'Adda S.Anna | " | 1.000 | 2.457 |
| Cassano d'Adda | Milano | 9.400 | 9.053 |
| Ponsi (S.I.B) | Bergamo | 30.000 | 16.578 |
| Gandellino | " | 4.600 | 4.610 |
| Avieseo | " | 6.100 | 2.050 |
| Grone (AE.C &C) | " | 4.100 | 3.447 |
| Valcanate | " | 3.311 | 1.265 |
| Alberetti | " | 1.560 | 1.034 |
| Ludrigno (Ardesio) | " | 12.080 | 8.973 |
| Nossa | " | 1.160 | 862 |
| Costone (Casnigo) | " | 2.740 | 2.348 |
| Mallero Inf. | " | 4.800 | 3.647 |
| Sondrio | " | 2.060 | 1.344 |
| Tartano (S.I.C) | " | 7.120 | 7.978 |
| Masino | " | 3.455 | 3.297 |
| Norbegno | " | 3.350 | 2.400 |
| Gerola Alta | " | 14.250 | 3.116 |
| S.Bernardo (C) | " | 20.200 | 6.935 |
| S.Francesco (Como) (C) | " | 140.000 | 69.251 |
| Campo | " | 43.200 | 16.963 |
| Premana (S.O.) | Como | 1.440 | 1.455 |
| Corenno Plinio (S.O.) | " | 12.040 | 8.227 |
| Bellano (S.O.) | " | 2.835 | 2.745 |
| Semenza (Calusco) (B) | Bergamo | 3.740 | 4.853 |
| Intede-Edilide (Ed) | Milano | 38.800 | 37.258 |
| Bertini-Paderno d'Adda (Ed) | " | 18.000 | 18.871 |
| Trezzo d'Adda (Ed) | " | 13.000 | 12.480 |
| Crespi d'Adda | Bergamo | 2.100 | 3.467 |
| Corona | " | 21.300 | 9.109 |
| Bordogna | " | 31.200 | 22.098 |
| Leurra | " | 2.560 | 1.318 |
| S.Pietro d'Orzio | " | 2.210 | 7.098 |
| S.Giov.Bianco (S.Bo) | " | 2.200 | 1.672 |
| Serrati (S.O) | " | 1.175 | 1.015 |
| Moncaglia (S.O) | " | 1.240 | 1.174 |
| S.Pellegrino (S.O) | " | 2.560 | 2.709 |
| Noble (Corno) | " | 1.056 | 1.082 |
| Vertova (Calusio) | " | 1.190 | 845 |
| Cene 1c | " | 1.200 | 932 |
| Comenduno (Cat B) | " | 3.735 | 1.831 |
| **Ticino** | | | |
| Biaccagno (S.V) | Varese | 4.240 | 1.768 |
| Corrido | Como | 3.820 | 2.773 |
| Creva di Luino (ST) | Varese | 12.300 | 7.383 |
| Vizzole | " | 32.635 | 42.235 |
| Turbigo sup. | Milano | 5.415 | 8.490 |
| Turbigo inf. | " | 1.508 | 1.595 |
| Vigevano (Ed) | Pavia | 5.350 | 4.830 |



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Abbreviation of the Company names :

| | | | | | |
|---|---|---|---|---|---|
| Ed | :Soc. Edison | S.V. | :Società Veneziana per Imprese Elett. | S.Ber | :Società Idroelettrica Bergamasca |
| E | :Soc.Elettrica Bresciana | S.G. | :Soc.an.Grobia | SIT | :Soc.Idroel. del Trese |
| C | :Soc.Cisalpina | S.L. | :Società Lombarda | Cot.H | :Cotonificio Hanegger |
| C.I.D | :Consorzio Idroel. Deseo | Il | :I l v a | S.I.B. | :Soc.Idroel. del Bellunese |
| Cant. | :Cantoni | A.F.L. | :Acciaierie & Ferriere Lombarde | S.I.C. | :Soc. Idroel. Comacine |
| Az C. | :Azienda Crespi | Ber | :Bernacchi | A.E.M. | :Azienda El.Municipale |

It may be useful to remark that some of the above named rivers supply also electric plants located in the compartiments bordering Lombardia (as Mincio which supplies plants in the province of Trento-Veneto and Ticino with plants in the province of Novara-Piemonte etc.) -

Table X - Thermoelectric plants above 1.000 Kw. -

| Plants | Province | Power KW | Plants | Province | Power KW |
|---|---|---|---|---|---|
| Dasto (naphta) | Bergamo | 3.900 | Legnano (Ber) | Milano | 2.300 |
| Brescia(EB) (naphta) (coal) | Brescia | 9.600 | Milano (AEM) | " | 30.000 |
| | | | Milano (Volta) (naphta) (coal) | " | 18.000 |
| Como(STC) (naphta) | Como | 1.200 | | | |
| Serraido | Mantova | 1.600 | | | |
| Coreico | Milano | 1.080 | Sesto S.Giovanni | " | 4.000 |
| Cusano Milorcino | " | 5.800 | Turbigo | " | 20.000 |
| Legnano (Cant) | " | 10.000 | Castellanza(coal) | Varese | 22.000 |
| | | | Total KW | | 138.480 |

for abbreviations see Table IX

Table XI - Summary of hydroelectric and thermoelectric plants -

| Provinces | Hydroelectric plants | | | | Thermoelectric plants | | | | T o t a l | |
|---|---|---|---|---|---|---|---|---|---|---|
| | beyond 1000 Kw | | up to 1000 Kw | | beyond 1000 | | up to 1000 Kw | | | |
| | No | Power | No | Power | No | Power | No | Power | No | Power |
| Bergamo | 34 | 185377 | 32 | 17110 | 1 | 3900 | 6 | 4350 | 80 | 210737 |
| Brescia | 29 | 317275 | 30 | 15674 | 1 | 9600 | 7 | 1930 | 76 | 344477 |
| Como | 4 | 20185 | 16 | 4337 | 1 | 1200 | 6 | 110 | 22 | 25832 |
| Cremona | - | - | 4 | 590 | - | - | - | - | 4 | 590 |
| Mantova | 1 | 2975 | 1 | 185 | 1 | 1600 | - | - | 3 | 4760 |
| Milano | 6 | 75870 | 10 | 6270 | 1 | 120000 | - | - | 17 | 202140 |

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also electric plants located in the compartiments bordering Lombardia (as Mincio which supplies plants in the province of Trento-Veneto and Ticino with plants in the province of Novara-Piemonte etc.) -

Table X - Thermoelectric plants above 1.000 KW. -

| Plants | Province | Power KW | Plants | Province | Power KW |
|---|---|---|---|---|---|
| Dasto (naphta) | Bergamo | 3.900 | Legnano (Ber) | Milano | 2.000 |
| Brescia(EB) (naphta) (coal) | Brescia | 9.600 | Milano (AEM) | " | 30.000 |
| | | | Milano (Volta) (naphta) (coal) | " | 18.000 |
| Como(STC) (naphta) | Como | 1.200 | | | |
| Sermide | Mantova | 1.600 | | | |
| Corsico | Milano | 1.080 | Sesto S.Giovanni | " | 4.000 |
| Cusano Milorcino | " | 5.800 | Turbigo | " | 20.000 |
| Legnano (Cant) | " | 10.000 | Castellanza(coal) | Varese | 22.000 |
| for abbreviations see Table IX | | | Total KW | | 138.480 |

Table XI - Summary of hydroelectric and thermoelectric plants -

| Provinces | Hydroelectric plants | | | | Thermoelectric plants | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | beyond 1000 Kw | | up to 1000 Kw | | beyond 1000 | | up to 1000 Kw | | | |
| | No | Power | No | Power | No | Power | No | Power | No | Power |
| Bergamo | 34 | 185877 | 39 | 17110 | 1 | 3900 | 6 | 4350 | 80 | 210737 |
| Brescia | 69 | 317873 | 36 | 15074 | 1 | 9600 | 7 | 1930 | 73 | 344477 |
| Como | 4 | 20125 | 15 | 4257 | 1 | 1200 | 2 | 110 | 22 | 25702 |
| Cremona | - | - | 4 | 500 | - | - | - | - | 4 | 500 |
| Mantova | 1 | 2975 | 1 | 185 | 1 | 1600 | - | - | 3 | 4760 |
| Milano | 5 | 75813 | 10 | 3873 | 8 | 100180 | 4 | 2450 | 28 | 182316 |
| Pavia | 1 | 5350 | 6 | 1830 | - | - | 1 | 550 | 8 | 7720 |
| Sondrio | 29 | 594597 | 8 | 2575 | - | - | 1 | 250 | 29 | 597422 |
| Varese | 3 | 49795 | 2 | 1050 | 1 | 22000 | - | - | 6 | 72815 |
| Total | 98 | 1131975 | 134 | 47204 | 13 | 138480 | 21 | 9640 | 356 | 1376829 |

7) Transformer substations - Following are the main transformer substations installed in the area of Lombardia :



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Table XII - Main transformer substations -

| Name | Province | Power | Name | Province | Power |
|---|---|---|---|---|---|
| Grassetto (A.E.M.) | Alessandria | (figures not available) | Milano-Museocco (Ed) | Milano | (figures not available) |
| Gorlago (C) | Bergamo | | Milano-P.Trento (AEM) | " | |
| Brescia (C) | Como | | Cislago (S.I.) | Varese | |
| Milano-Brugherio (Ed) | Milano | | Mortara (Ed) | Pavia | |
| Milano-Baggio (Ed) | " | | | | |

For abbreviations see Table II.

The substations belonging, as normally, to the electric plants are not mentioned.

8) Transmission lines - The transmission of electric power is carried out by a system of overhead lines whose voltage varies, according the different conditions and functions, from 20.000 to 220.000 volt (the latter for the long distance transmission).

9) Map of the electric system - The attached map shows the system of the main :
- Hydroelectric plants
- Thermoelectric plants
- Transformer substations
- Transformer cabins (which are the minor substations installed near the consumption centers; the most important centers generally dispose of more than one of the above cabins)
- Transmission lines differentiated according to the voltage rating.

10) Corporate organization - The electric power generation and distribution in Lombardia is controlled by the Società Edison which is the leading Society of the Group "Edison". This group extends its control on the bordering compartments (Liguria, Emilia etc.) either in the field of the electric power and generation or in the public works and utilities working.
The main Societies of the group are :
- Società An. Edison (as above mentioned)
- Società An. Generale Elettrica Cisalpina with several affiliated societies
- Società An. Elettrica Bresciana " " "
- Società An. Forze Idrauliche di Tresso sull'Adda " " "
- Società An. Milanese per le Imprese Elettriche
- Società An. Italiana di Esercizi Elettrici
- Società An. Italiana per le Strade Ferrate del Mediterraneo

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The substations belonging, as normally, to the electric plants are not mentioned.

8) Transmission lines - The transmission of electric power is carried out by a system of overhead lines whose voltage varies, according the different conditions and functions, from 20.000 to 220.000 volt (the latter for the long distance transmission).

9) Map of the electric system - The attached map shows the system of the main :
- Hydroelectric plants
- Thermoelectric plants
- Transformer substations
- Transformer cabins (which are the minor substations installed near the consumption centers; the most important centers generally dispose of more than one of the above cabins)
- Transmission lines differentiated according to the voltage rating.

10) Corporate organization - The electric power generation and distribution in Lombardia is controlled by the Società Edison which is the leading Society of the Group "Edison". This group extends its control on the bordering compartments (Liguria, Emilia etc.) either in the field of the electric power and generation or in the public works and utilities working.
The main Societies of the group are :
- Società An. Edison (as above mentioned)
- Società An. Generale Elettrica Cisalpina with several affiliated societies
- Società An. Elettrica Bresciana " " "
- Società An. Forze Idrauliche di Trezzo sull'Adda " "
- Società An. Dinamo per le Imprese Elettriche
- Società An. Emiliana di Esercizi Elettrici
- Società An. Italiana per le StraddeFerrate del Mediterraneo
- Società per Distribuzione di energia elettrica Ovesticino
- Società Orobia
- Società Elettrica Bergamasca
- Società Idroelettrica Comacina
- Società Tramvie Elettriche Lombarde (S.T.E.L.)
- Società Generale Italiana Accumulatori Elettrici
- Nazionale Canossetre (Soc.)
- Società An. per Distribuzione di Energia Elettrica Enticino



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The group Edison is the most important electric group of Italy; out of the same a small part of the electric power generation and distribution in Lombardia is controlled by companies of secondary importance as the "Azienda Elettrica Municipale" of Milano (which keeps a share of the public works and utilities of Milano), "Società Lombarda di Elettricità" and like.
The area controlled does not indicate the electric plants owned by the group Edison be installed all in the same area; in fact the group Edison own important electric plants in the compartments of Piemonte and Venezia served by their own transmission ligns.
The above list (Tables IX and X) has however reported only the electric plants existing in Lombardia, abstracting from their ownership and from the other plants out of the compartment owned by the same group (the ownership has been reported, when possible, only as an adjunctive information).

11) Manufacturers of electric apparatus and materials - The Lombardia is the most industrial compartment of Italy (followed close by Piemonte and Venezia) thanks chiefly to its geographical position. The large availability of workmanship and motive force, the facilities of the inward and abroad carriages, the plane configuration and like were the main causes of the rapid development of all the industries. The electrical industry particularly is linked to a lot of accessories industries (by instance: insulating materials, electric meters and like) which, grown up around the nucleous of the main industry have created the best conditions of an easy and economical working..
The following Table XIII reports a list of the main manufacturers of Lombardia accompanied by short informations about their production and listed according the following classes :

Class a) Water wheels and their accessories
b) Steam turbines, gas & oil prime movers
c) A.C. & D.C. generators, motors, converters, transformer & regulators
d) Rectifiers
e) Switchgear & switchgear devices
f) Meters, instruments & measuring apparatus
g) Electric conductors & cables
h) Line materials
i) Lighting appliances

Class l) Heating, refrigerating, industrial & domestic appliances
m) Electric traction equipments
n) Marine equipments
o) Storage batteries
p) Wire telephony and telegraph apparatus
q) Radio communications apparatus (incl. tubes)
r) Insulating materials
s) Miscellaneous electrical products
t) Important contractors

Table XIII - List of the manufacturers of electrical apparatus and materials. -

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ation).

11) Manufacturers of electric apparatus and materials - The Lombardia is the most industrial compartment of Italy (followed close by Piemonte and Venezie) thanks chiefly to its geographical position. The large availability of workmenship and motive force, the facilities of the inward and abroad carriages, the plane configuration and like were the main causes of the rapid development of all the industries. The electrical industry particularly is linked to a lot of accessories industries (by instance: insulating materials, electric motors and like) which, grown up around the nucleous of the main industry have created the best conditions of an easy and economical working..
The following Table XIII reports a list of the main manufacturers of Lombardia accompanied by short informations about their production and listed according the following classes :

Class a) Water wheels and their accessories
b) Steam turbines, gas & oil prime movers
c) A.C. & D.C. generators, motors, converters, transformer & regulators
d) Rectifiers
e) Switchgear & svichgear devices
f) Meters, instruments & measuring apparatus
g) Electric conductors & cables
h) Line materials
i) Lighting appliances
l) Heating, refrigerating, industrial & domestic appliances
m) Electric traction equipments
n) Marine equipments
o) Storage batteries
p) Wire telephony and telegraph apparatus
q) Radio communications apparatus (incl. tubes)
r) Insulating materials
s) Miscellaneous electrical products
t) Important contractors

Table XIII - List of the manufacturers of electrical apparatus and materials. -

| Manufacturers | Production |
|---|---|
| a) Water wheels and accessories | |
| S.A. Costruzioni Meccaniche Riva-Milano | Water wheels, pumps, penstock |
| S.A. Franco Tosi Legnano | Penstocks (system Tubi Togni) steel pipes |
| Acciaierie & Tubificio di Brescia-Brescia | |
| b) Steam turbines, gas & oil prime movers | |
| S.A. Franco Tosi Legnano - Milano | Steam boilers and erection work |
| Soc. Forni & Impianti Industriali-Legnano | |



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| Manufacturers | | Production |
|---|---|---|
| c) <u>A.C. & D.C. generators,motors,converters,transformer.</u> | | |
| Tecnomasio Ital.Brown Boveri | Milano | All electric machinery |
| Compagnie Generale di Elettricith-Milano | | " " " |
| F.A.E.Marelli & C. Sesto S.Giovanni | " | " " " switchboards |
| S.A.Ernesto Breda | Milano | Electric machinery & equipments for electric plants |
| S.A.Officine Elettroferroviarie Tallero | Milano | |
| Officine Trasformatori Elettrici (OTE) | Bergamo | Power & distribution transformers |
| S.A. Industrie Elettriche di Legnano | | |
| S.A. Elettromeccanica Lombarda (Ingg. Grugnola & Solari) | Sesto S.Giovanni | Motors and transformers |
| Officine Elettrotermiche Italiane Ing.V.Arcioni | Milano | Regulating and special transformers |
| Officine Consorzio Elettrotecnico | Milano | Motors |
| S.A. Elettromeccanica Enrico Berri | Lambrate (Milano) | Small and special motors only |
| S.A. Alfieri e Celli | Milano | Power and distributers transformers only Repair shop. |
| d) <u>Rectifiers</u> | | |
| Tecnomasio Ital. Brown Boveri | Milano | Mercury & steel tank water & air cooled rectifiers |
| Compagnia Gen. di Elettricità | " | " " " " |
| e) <u>Switchgear and switchgear devices</u> | | |
| S.A. Magnini | Bergamo | Switchgear and switchgear devices of all types up to 250.000 V |
| Tecnomasio Ital. Brown Boveri | Milano | |
| Compagnia Gen. di Elettricità | " | |
| Officine Elettrotechniche & Meccaniche "Adda" | Lodi | Switchgear and electric equipments up to 250.000 V |
| S.A. Costruzioni Elettromeccaniche S.A.C.E. | Bergamo | Medium and low voltage switchgear |
| Bagnagatti A. | Milano(Greco) | Switchboards and H.V. disconnecting switches |
| Telemeccanica El. Ingg.Luria & Grosfurini | Milano | Contactors and motor control devices |
| Elettromeccanica Fantini | Milano | Low voltage switchgear |
| Palazzoli F. & C. | Brescia | " " " |
| Comp.Ital.Materiali Elettrici | Milano | Contactors and motor control devices |
| S.A. Vanossi | " | " " " " " |
| S.A.Officine Elettrotecniche Cosmos | Cosmo | Low voltage switchgear devices |
| Officine Elettromeccaniche Ragazzi | Parabiago (Milano) | " " diffuse small breakers & current limiters |
| Laboratorio Meccanico di Precisione "Comerel" | Milano | Small switchgear, panel switches |
| Crosi e Farinelli | Milano | Panel switches & wiring materials |
| Ferraris Ing. Vittorio | Milano | Mercury bulb auxiliary relays |

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| | | |
|---|---|---|
| S.A. Elettromeccanica Lombarda (Ing. Grugnola & Solari) | Sesto S.Giovanni | Motors and transformers |
| Officine Elettrotermiche Italiane ing.V.Arcioni | Milano | Regulating and special transformers |
| Officine Consorzio Elettrotecnico | Milano | Motors |
| S.A. Elettromeccanica Enrico Bezzi | Lambrate (Milano) | Small and special motors only |
| S.A. Alfieri e Colli | Milano | Power and distributers transformers only<br>Repair shop. |
| **d) Rectifiers** | | |
| Tecnomasio Ital. Brown Boveri | Milano | Mercury & steel tank water & air cooled rectifiers |
| Compagnia Gen. di Elettricità | " | " " " " |
| **e) Switchgear and switchgear devices** | | |
| S.A. Magnini | Bergamo | Switchgear and switchgear devices of all types up to 350.000 V |
| Tecnomasio Ital. Brown Boveri | Milano | |
| Compagnia Gen. di Elettricità | "" | |
| Officine Elettrotecniche & Meccaniche "Adda" | Lodi | Switchgear and electric equipments up to 350.000 V |
| S.A. Costruzioni Elettromeccaniche S.A.C.E. | Bergamo | Medium and low voltage switchgear |
| Bagnagatti A. | Milano(Greco) | Switchboards and H.V. disconnecting switches |
| Telemeccanica El. Ingg.Maria & Gregorini | Milano | Contactors and motor control devices |
| Elettromeccanica Fantini | Milano | Low voltage switchgear |
| Palazzoli F. & C. | Brescia | " " " |
| Comp.Ital.Materiali Elettrici | Milano | Contactors and motor control devices |
| S.A. Vanossi | " | " " " " " |
| S.A.Officine Elettrotecniche Comensi | Como | Low voltage switchgear devices |
| Officine Elettromeccaniche Bapizzi | Parabiago (Milano) | " " " " fuse small breakers & current limiters |
| Laboratorio Meccanico di Precisione "Comerci" | Milano | Small switchgear, panel switches |
| Croci e Farinelli | Milano | Panel switches & wiring materials |
| Ferraris Ing. Vittorio | Milano | Mercury bulb auxiliary relays |
| **f) Meters, instruments and measuring apparatus** | | |
| Compagnia Gen.di Elettricità | Milano | Meters |
| Stabilimenti Sing Chesson | Milano | " |
| Compagnia Continentale Brunt | Milano | " |
| Allocchio e Bacchini | Milano | Instruments & measuring apparatus |
| Istrumenti di misure C.C.S. | Monza | Instruments, meters |
| S.I.E.E.T. Soc.it. per Istrumenti Elettrici Pozzi e Traveri | Milano | Transformers up to highest voltages<br>Instruments and test apparatus |

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| Manufacturers | | Production |
|---|---|---|
| g) Electrical conductors & cables | | |
| Soc.Metallurgica Italiana | Milano | Aluminium & copper bare wires and stranded conductor of all types |
| Società Italiana Pirelli | Milano | Insulated wires, conductors and high voltage cables |
| E. Castiglioni | Milano | |
| S.A. Pasta | Milano | Insulated conductors |
| S.A.F.I. (Soc.An.Fili Isolanti) | Milano | |
| h) Line materials (clamps, joints, connecters, brackets, poles). | | |
| E. Volpato | Milano | Mainly clamps and joints |
| Impresa Forniture Industr. | Milano | Jointing sleeves for aluminium conductors and bimetal conductors |
| Elettroconduttore S.A. | Milano | Mainly clamps and joints |
| Brizza A. | Milano | " " " " |
| Ceriboni G. Lecco | (Como) | " " " " |
| Soc.Industria Elettrotecnica Rebuzzi, Bregi & C. | Milano | Clamps & joints, rail connectors for electrified railroads |
| Rossi Tranquillo | Milano | Creosoted pure poles |
| i) Lighting appliances (incl.lamps) | | |
| Società Riunite Osram | Milano | All types of lamps & lighting accessor. |
| Philips | Milano | " " " " " " |
| Tungsram Elettr.Ital.S.A. | Milano | Lamps |
| S.A.Fabbriche Riun. NEON | Milano | Luminous tubes |
| Helophane | Milano | Diffusing equipments |
| Ing.Gaetano Buonfiglio | Milano | Strict lighting equipment |
| La Filotecnica Salmoiraghi | Milano | Reflectors |
| l) Heating & refrigerating industrial & domestic appliances | | |
| Tecnomasio Brown Boveri | Milano | Induction, arc & resistance furnaces electric arc steam boilers - heating domestic appliances - bread ovens |
| Comp.Gen. di Elettricità | Milano | Industrial and domestic heating appliances |
| S.A.Ercole Marelli, Sesto S.Giovanni | | Fans and ventilation equipments, small motors for all kind of domestic appliances |
| S.A. Ing.F.Ferri | Milano | Industrial resistance furnaces |
| S.A.Ing.L.Tagliaferri & C. | Milano | Arc furnaces for steel mills |
| Soc. S.F.E.I.T. Novate Milanese | " | Resistance furnaces |
| S.A. Fenwick | Milano | Electric furnaces up to 3000° C. |
| Ing. Gaetano Belaguti | Milano | Electric arc steam boilers |
| Ing. C.Mascarini | Milano | Miscellaneous domestic appliances |
| Fabbriche Elettrotecniche Riunite | Milano | Industrial & domestic refrigerating appliances |
| Ing. C. Bellitoria | Milano | |

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| | | |
|---|---|---|
| S. Volpato | Milano | Mainly clamps and joints |
| Impresa Forniture Industr. | Milano | Jointing sleeves for aluminium conductors and bimetal conductors |
| Elettroconduttore S.A. | Milano | Mainly clamps and joints |
| Brizza A. | Milano | " " " " |
| Ceribeni G. Lecco | (Como) | " " " " |
| Soc.Industria Elettrotecnica Meblasio,Bregi & C. | Milano | Clamps & joints, rail connectors for electrified railroads |
| Rossi Tranquillo | Milano | Creosoted pure poles |
| **i) Lighting appliances** (incl.lamps) | | |
| Società Riunite Osram | Milano | All types of lamps & lighting accessor. |
| Philips | Milano | " " " " " " |
| Tungsram Elettr.Ital.S.A. | Milano | Lamps |
| S.A.Fabbriche Riun. NEON | Milano | Luminous tubes |
| Holophane | Milano | Diffusing equipments |
| Ing.Gaetano Buonfiglio | Milano | Strict lighting equipment |
| La Filotecnica Salmoiraghi | Milano | Reflectors |
| **l) Heating & refrigerating industrial & domestic appliances** | | |
| Tecnomasio Brown Boveri | Milano | Induction, arc & resistance furnaces electric arc steam boilers - heating domestic appliances - bread ovens |
| Comp.Gen. di Elettricità | Milano | Industrial and domestic heating appliances |
| S.A.Ercole Marelli,Sesto S.Giovanni | | Fans and ventilation equipments,small motors for all kind of domestic appliances |
| S.A. Ing.F.Ferri | Milano | Industrial resistance furnaces |
| S.A.Ing.L.Tagliaferri & C. | Milano | Arc furnaces for steel mills |
| Soc. S.F.E.A.T. Novate Milanese | " | Resistance furnaces |
| S.A. Fenwick | Milano | Electric furnaces up to 3000° C. |
| Ing. Gaetano Malaguti | Milano | Electric arc steam boilers |
| Ing. C.Mascarini | Milano | Miscellaneous domestic appliances |
| Fabbriche Elettrotecniche Riunite | Milano | Industrial & domestic refrigerating appliances |
| Ing. C. Bell'Orto | Milano | Refrigerators |
| M.Redaelli | Milano | |
| **m) Electric traction equipments** | | |
| Tecnomasio Brov Boveri | Milano | Electric & Diesel electric locomotors - storage battery locomotives - Self propelled cars for tramways and railway service - trolley buses - Electric buses |
| Comp.Gen.di Elettricità | Milano | Electric locomotors & self propelled cars - trolley buses - electric limbs (storage battery) |
| S.A. E.Marelli,Sesto S.Giovanni | " | Electric locomotors and self propelled cars - tolley buses |
| S.A.Ital.E.Breda | Milano | Electric motors and self propelled cars Steam locomotives |



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| Manufacturers | | Production |
|---|---|---|
| a) Marine equipments | | |
| S.A. Ercole Marelli & C. | Sesto S.Giovanni | Electric propulsion equipments for ships and submarine |
| S.A. Magrini | Bergamo | Special switchboard & switchgear devices for marine application |
| Compagnia Gen.di Elettricità | Milano | Electric propulsion equipments for ships and submarines complete with switchgear |
| Tecnomasio It. Brown Boveri | Milano | " " " " " |
| e) Storage batteries | | |
| Soc.Gen.Ital. Accumulatori Elettrici | Melzo (Milano) | Tudor trade mark accumulators and dry-batteries for all applications |
| Fabbrica Accumulatori Nessemberger S.A. | Monza (Milano) | Nessemberger trade mark batteries |
| Fabbrica It. Magneti Marelli | Sesto S.Giovanni (Milano) | |
| Accumulatori Dott.Scaini S.A. | Milano | |
| Elettromeccanica Fratelli Radaelli | Monza (Milano) | Nikel - iron - alkaline batteries |
| p) Wire telephony & telegraphy apparatus - | | |
| Siap | Milano | |
| S.A. Brevetti Arturo Perego | Milano | All kind of telephone apparatus & connected equipments - automatic stations relays - special insulated telephone equipment for high voltage transmission line applications - carrier current telephony |
| F.A.C.E. | Milano | Telephone & telegraph apparatus and devices -relays |
| Allocchio & Bacchini & C. | Milano | Carrier and high frequency telephone and telegraph equipments |
| S.A.F.A.R. | Milano | Special telephone & telegraph devices |
| q) Radio communicating apparatus (incl. tubes) | | |
| S.A.F.A.R. | Milano | Radio transmitter & receiving sets - Television - Cathode ray tubes manufact. |
| Allocchio & Bacchini | Milano | Radio transmitter & receiving sets television |
| F.A.C.E. | Milano | " " " " " " |
| Fabbrica It. Magneti Marelli | Sesto S.Giovanni " | " " " " " " |
| Fabbrica It. Valvole Radioelettriche F.I.V.R.E. | Milano | Vacuum tubes for transmitting, receiving and rectifying uses |
| Compagnia Gen.di Elettricità | Milano | Radio receiving sets |
| F.I.M.E. | Saronno( " ) | " " " |
| Società Philips | Monza ( " ) | Vacuum tubes for transmitting, receiving and rectifying uses |
| Società Telefunken | Milano | " " " " " |
| r) Insulating materials | | |
| Soc.Elmorraria Valtellinese | Sondrio | Asbestos and asbestos products |
| Cartonificio Zarzenà S.A., | Gorle(Bergamo) | Insulating paper |
| Cartonificio & Tessitura F.lli Pont | | Cotton tape |

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| | | |
|---|---|---|
| Fabbrica Accumulatori Hagenberger S.p.A. Monza | (Milano) | Hagenberger trade mark batteries |
| Fabbrica It. Magneti Marelli Sesto S.Giovanni | (Milano) | |
| Accumulatori Dott.Scaini S.A. | Milano | Nikel - iron - alkaline batteries |
| Elettromeccanica Fratelli Radaelli Monza | (Milano) | |

p) Wire telephony & telegraphy apparatus -

| | | |
|---|---|---|
| Olap | Milano | All kind of telephone apparatus & connected equipments - aplematic stations relays - special insulated telephone equipment for high voltage transmission line applications - carrier current telephony |
| S.A. Brevetti Arturo Perego | Milano | |
| F.A.C.E. | Milano | Telephone & telegraph apparatus and devices -relays |
| Allocchio & Bacchini & C. | Milano | Carrier and high frequency telephone and telegraph equipments |
| S.A.F.A.R. | Milano | Special telephone & telegraph devices |

q) Radio communicating apparatus (incl. tubes)

| | | |
|---|---|---|
| S.A.F.A.R. | Milano | Radio transmitter & receiving sets - Television - Cathode ray tube manufact. |
| Allocchio & Bacchini | Milano | Radio transmitter & receiving sets television |
| F.A.C.E. | Milano | " " " " " " |
| Fabbrica It. Magneti Marelli Sesto S.Giovanni | " | " " " " " " |
| Fabbrica It. Valvole Radioelettriche F.I.V.R.E. | Milano | Vacuum tubes for transmitting, receiving and rectifying uses |
| Compagnia Gen.di Elettricità | Milano | Radio receiving sets |
| F.I.M.S. | Sarenno ( " ) | " " " |
| Società Philips | Monza ( " ) | Vacuum tubes for transmitting, receiving and rectifying uses |
| Società Telefunken | Milano | " " " " " |

r) Insulating materials

| | | |
|---|---|---|
| Soc.Mineraria Valtellinese | Sondrio | Asbestos and asbestos products |
| Cartonificio Barzanò S.A., | Cene (Bergamo) | Insulating paper |
| Mastrificio & Tessiture E. Pont Cagliodo | (Milano) | Cotton tape |
| Società Italiana Resine | Milano | Synthetic resins |
| Giorgio Negri & C. | | Insulating varnishes - micanite and bakelite products - mica paper and mica silk paper |
| Magrini S.A. | Bergamo | Treated paper and fabric - micarta products - micanite products - micarta gears - molded plates |
| Monti e Martini S.A. | Milano | Synthetic resins - bakelite products - insulating varnishes - molded materials mica and micanite products |
| Isola S.A. | Milano | Treated paper cylinders |
| Società Industria Mica Italiana | Sondrio | |



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| Manufacturers | | Production |
|---|---|---|
| S.A. Fibra Vulcanizzata | Milano | Vulcanized fiber materials |
| Soc.Ital. Ebanite Sostituti | Monza | Molded materials and special resins |
| Soc. Italiana Pirelli | Milano | |
| S.A. Oleoblitz Lubrificanti | Milano | |
| Fidenza S.A. Vetrerie | Milano | Glass insulators, miscellaneous glass products |
| Manifatture Isolatori Vetri Affini | Milano | Glass and pyrex insulators - miscellaneous glass products |
| Soc.Ital. del Gres-Ing.Sala | Bergamo | Gres insulators & gres products |
| a) Miscellaneous electrical products | | |
| Ceretti & Tanfani | Milano | Cranes and hoists |
| S.A. G.Redaelli & F. | Milano | |
| Officine Elettroferroviarie Tallero | Milano | Elevators and escalators |
| Officine Meccaniche Stigler | Milano | |
| Tecnomasio Ital.Brown Boveri | Milano | Arc welding equipments |
| Compagnia Gen.di Elettricità | Milano | |
| E.Marelli & C. Sesto S.Giovanni | " | |
| Officine Elettroferroviarie Tallero | Milano | |
| Ipsea Soc. in Acc. | Milano | Static condensers |
| CLME, Comp.It. Materiali Elettr. | " | |
| Tecnomasio It.Brown Boveri | Milano | |
| S.A. Passoni & Villa | Bergamo | Lightning arresters |
| Magrini S.A. | | |
| Microfarad Fabbrica Italiana Condensatori | Milano | |
| Magrini S.A. | Bergamo | Electric regulators |
| Comp.Gen.di Elettricità | Milano | |
| Tecnomasio It. Brown Boveri | Milano | Carbon brushes and electrodes |
| Ing. I.Bader | | " " " " |
| Ing. Beletti & C. S.A. | Milano | " " " " |
| Laboratorie Chimico Vertico | Milano | " " " " |
| S.E.C.I. | Milano | " " " " |
| S.A.Ital. Driver Harris | Milano | Arc furnace electrodes and electrodes for electrolytic cells |
| Soc.Ital. Forni Elettrici & Elettromeccanici | Milano | |
| Officine Micro-Elettromeccaniche | " | |
| Ing.Beletti & C. S.A. | Milano | |
| S.A. Elettrografite di Forno Alkione | Milano | |
| Società "Il Carbonio" | Milano | Electrolyte baths equipments |
| Borettini Waldberg & C.S.A. | Milano | |
| Elpev S.A. | Milano | |
| Roncati S.A. | | |
| Soc.An.E.C.E.E. Ing.A. Gerosa | Milano S.Giovanni | " |

Declassified E.O. 12356 Section 3.3/NND No. 785019

| | | |
|---|---|---|
| Coretti & Tanfani | Milano | Cranes and hoists |
| S.A. G.Redaelli & F. | Milano | |
| Officine Elettroferroviarie Tallero | Milano | |
| Officine Meccaniche Stigler | Milano | Elevators and escalators |
| Tecnomasio Ital.Brown Boveri | Milano | |
| Compagnia Gen.di Elettricità | Milano | |
| E.Marelli & C. Sesto S.Giovanni | " | |
| Officine Elettroferroviarie Tallero | Milano | Arc welding equipments |
| Ipsea Soc. in Acc. | Milano | |
| CIME, Comp.It. Materiali Elettr. | " | |
| Tecnomasio It.Brown Boveri | Milano | |
| S.A. Passoni & Villa | | Static condensers |
| Magrini S.A. | Bergamo | |
| Microfared Fabbrica Italiana Condensatori | Milano | |
| Magrini S.A. | Bergamo | Lightning arresters |
| Comp.Gen.di Elettricità | Milano | |
| Tecnomasio It. Brown Boveri | Milano | |
| Ing. I.Bader | | Electric resistors |
| Ing. Belotti & C. S.A. | Milano | Carbon brushes and electrodes |
| Laboratorio Chimico Vertico | Milano | " " " " |
| S.E.C.I. | Milano | " " " " |
| S.A.Ital. Driver Harris | Milano | " " " " |
| Soc.Ital. Forni Elettrici & Elettromeccanici | Milano | " " " " |
| Officine Micro-Elettromeccaniche | " | Arc furnace electrodes and electrodes for electrolytic cells |
| Ing.Belotti & C. S.A. | Milano | |
| S.A. Elettrografite di forno Albisone | Milano | |
| Società "Il Carbonio" | Milano | |
| Borettini Waldberg & C.S.A. | Milano | |
| Elpev S.A. | Milano | Electrolyte belts equipments |
| Roncuti S.A. | Milano | |
| Soc.An.S.C.A.E. Ing.A. Corti Sesto S.Giovanni | " | |
| Fabbr.It.Magneti Marelli Sesto S.Giovanni | | Permanent magnets |
| S.A.M.P.A.G. | Milano | |
| Fonderie Milanesi di Acciaio Vanzetti | Milano | Special steel & cast iron alloys |
| Ing. Francioni & C. | Milano | |
| Croli & Farinelli | Milano | |
| C.E.C. Officine Elettrotecnica Comense | Como | Wiring materials |
| Federico Palazzoli & C. | Brescia | |
| Officine Elettromeccaniche Rapisardi Parabiago | (Milano) | |

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Declassified E.O. 12356 Section 3.3/NND No. 785019

| Manufacturers | | Production | |
|---|---|---|---|
| Alo Costruzioni Elettromeccaniche | Milano | | |
| Elettromeccanica Marchelli & Vercesi | Milano | | |
| Fabbrica Ital. Apparecchi Elettrici | Milano | | |
| Officina Elettromeccanica G. Colombo | Sesto Ariaizio | | |
| Officina Elettromeccanica A Baldocci | Rutena | | |
| F. Boldi & C. | Sesto Calende | | |
| Siciliani E. & C. | Milano | | |
| SIEL Soc.Ind.Elettromeccanica Lombarda | Milano | Wiring materials | |
| AVE | Vistone (Brescia) | | |
| C.I.F.I. Unione It. Tubi Saldati | Vistone (Brescia) | protective tubes of the Heymeer type | |
| S.A. G.Radaelli & F. | Milano | | |
| S.A. Comp.It. Tubi Metallici Flessibili | Milano | Flexible metal protective pipes | |
| t) Important contractors | | | |
| Impresa Umberto Girola | Milano | Contractors for hidroelectric plants construction work - Dams & artificial lakes | |
| Terme Giuseppe & C. S.A. | Milano | | |
| S.A.E. Soc.An.Elettrifici | Milano | | |
| Vitaliano Sesitti Roma - Napoli | Milano | Electric transmission & telephone lines & installation | |
| S.I.E.L.T.E. | Milano | Specialized in the creation of telephonic lines | |

For more details apply to "Repertorio Elettrotecnico 1941" issued by Associazione Elettrotecnica Italiana.

ING. GIUSEPPE D'AYALA VALVA

Declassified E.O. 12356 Section 3.3/NND No. 785019

| | | | |
|---|---|---|---|
| Siciliani E. & C. | | Milano | |
| SIEL Soc.Ind.Elettromeccanica Lombarda | | Milano | Wiring materials |
| AVE | Vistone | (Brescia) | |
| U.I.T.I. Unione It. Tubi Isolanti Vistone | | (Brescia) | protective tubes of the Bayocer type |
| S.A. G.Radaelli & F. | | Milano | |
| S.A. Comp.It. Tubi Metallici flessibili | | Milano | Flexible metal protective pipes |
| **i) Important contractors** | | | |
| Impresa Umberto Girola | | Milano | Contractors for hidroelectric plants construction work - Dams & artificial lakes |
| Torno Giuseppe & C. S.A. | | Milano | |
| S.A.E. Soc.An.Elettrifici | | Milano | |
| Vitaliano Bocetti | Roma - Napoli | Milano | Electric transmission & telephone lines & installation |
| S.I.E.I.T.E. | | Milano | Specialized in the creation of telephonic lines |

For more details apply to "Repertorio Elettrotecnico 1941" issued by Associazione Elettrotecnica Italiana.

ING. GIUSEPPE D'AYALA VALVA



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Declassified E.O. 12356 Section 3.3/NND No. 785019

Tel.489081
Ext. 317

W.1/ac

INTER OFFICE MEMORANDUM

Reference : 197/FWU

12 March 1945

Subject : Electricity Northern Italy

To : FOOD SUB-COMMISSION
AGRICULTURE SUB-COMMISSION
INDUSTRY SUB-COMMISSION
TRANSPORTATION SUB-COMMISSION

1) - Confirming telephone conversation it is proposed to hold a meeting for the purpose of discussing the availability of electric power in Northern Italy after occupation.

2) - It is requested that a representative from your Sub-Commission attend this meeting and be prepared to give an approximate estimate of the amount of power required for your needs together with the approximate location.

3) - The meeting will be held in Room 16, 8th floor at 1400 hours on Wednesday 14th March 1945.

W.W.LAPPER
Lt-Colonel
Chief Elec. Div.

cc : Lt.Col.Parker
Maj.Barry
" Renton
" Price
" Laughlin

573

0 6 3 81

Declassified E.O. 12356 Section 3.3/NND No. 785019

File 197

Mediterranean Theatre Operations

Engineer Section

5

16 Feb 45

Report on Hydro Electric Plant
Ceresole Valley

See file 124
folio 85.

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0 6 3 9 1

Declassified E.O. 12356 Section 3.3/NND No. 785019

SECRET

Tel.489081
Ext. 317

HEADQUARTERS ALLIED COMMISSION
Public Works and Utilities Sub-Commission
AFO 394

LWL/ac

4

Reference : 197/PWU

8 March 1945

Subject : Report Hydro Plants

To : ADVANCED SECTION - ELECTRICAL DIVISION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION, AC
(Attn Maj.R.A.Bell) in care of Florence Province AND
telephone Florence 1153

1) - Attached letter on hydro plants transmitted for your information.

W.M.LAPPER
Lt-Colonel
Chief Elec. Div.

2 enclosures
MTO - E.S. undated

SECRET

5735

0 6 4 0 1

Declassified E.O. 12356 Section 3.3/NND No. 785019

Fil 3

COPY

Subject : Electric Supply - Northern Italy

HQ ALLIED ARMIES IN ITALY
Tel. Filpot 311
2112/DW

30 Nov. 44

D.W.
HQ A.A.I.

1) - Of the 4,000,000 of generating capacity generated by the 750 hydro stations in Northern Italy, the bulk is situated in :

(a) - The Turin and Milan provinces
(b) - Bolzano region
(c) - Alpine District north of Venice.

The Po Valley and the near Venice region are almost completely devoid of generating capacity.

2) If, therefore, the enemy continues to carry out successfully his avowed plicy of complete distruction of power plants and sub-stations the North of Italy will undoubtedly become untenable.

3) If, however, the battle progresses well and subsequent to the fall of Bologna the enemy finds it necessary to withdraw rapidly from the Turin and Milan provinces to a line on the river ADIGE, it is quite probable that as much as 10% of the hydro-stations may be left intact. These would more than likely be the smaller of the stations as the enemy has already made plans and placed demolition charges in some of the larger plants. Conversely, however, it is almost a certainty that in the North East of Italy where the chief stations are situated in the line of the German retreat that 100% demolition will occur - a fact which has been borne out by experience up to date in this theatre.

4) The absolute minimum of power required to satisfy military occupation and requirements covering such loads as water supply, cold storage and military accommodation, in the larger centres of North Italy, is 347,000 KW, representing 13.5 per cent of the normal requirements of the centres under discussion, of this total 129,000 KW will be required in the Venice and Emilia zones.

5) The problem therefore becomes one of transmitting power from the North-west to the North-east rather than that of generation.

6) It is understood from Lt.Col.Papper of the Allied Commission who has recently returned from the U.K. that the C.E.B. have made available to the W.D. their stock of portable emergency sub-station equipment made for them at the beginning of the war.

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7) This equipment, especially the outdoor type is even at this moment vitally needed in the restoration of transmission lines. When Northern Italy falls such equipment will become absolutely essential if the country is to be tenable at all.

./.

Declassified E.O. 12356 Section 3.3/NND No. 785019



May therefore the following equipment be made available to this theatre at a very early date :

C.E.B. Type emergency sub-station sets incorporating

Circuit Breakers

| K.V. | Rupturing Capacity M.V.A. | Current Rating Amps. | N° Available | Required O/H line type | Required Cable Type |
|---|---|---|---|---|---|
| 11 | 250 | 800 | 100 | 10 | |
| | 500 | 1200 | 100 | 10 | Nil |
| 33 | 500 | 800 | 100 | 20 | 10 |
| 66 | 750 | 800 | 50 | 10 | 5 |

Tripping Batteries

| | Available | Required |
|---|---|---|
| For 11 KV and 33 KV Switchgear (13V) | 66 | 50 |
| " 66 " Switchgear (36V) | 16 | 15 |

Voltage Synchronising Units

| | | |
|---|---|---|
| 11/6.6 KV | 26 | 10 |
| 33/22 KV | 13 | 5 |
| 66 KV | 5 | 5 |

Ancillary transformers 130 KVA

| | | |
|---|---|---|
| 11/6.6 KV/400 V | 40 | 10 |
| 33/22 KV/400 V | 27 | 15 |
| 66 KV/400 V | 9 | 5 |

Potential transformers

| | | |
|---|---|---|
| 11/6.6 KV/110 V | 40 | 10 |
| 33/22 KV/110 V | 27 | 15 |
| 66 KV/110 V | 15 | 10 |

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8) If the principle is agreed it is recommended that a technical representative from this theatre visits U.K. to discuss technical details and methods of construction with the C.E.B., so that direction can be given to the E & M personnel who will be involved in this work.

A.W.PAGE
Lt.Col.R.E.
ADV (E & M)

Declassified E.O. 12356 Section 3.3/NND No. 785019

0 6 4 21

6 197 2

Tel: 478906 HEADQUARTERS ALLIED COMMISSION WSR/lm
APO 194
Public Works and Utilities Sub- Commission

10 November, 44

110/ /PWU

Subject: List of North Italy Electric Company Engineers.

To : A.A.I. B.N. (Att. Lt. Col. A.N. Page)
C.C., No. I District(Att. Major William Rivett)
5th Army A.G (Att. Captain Gaither).

1. Transmitted herewith is one copy each of a list showing the names and last known business addresses of engineers employed in key positions by the electric companies in the Liguria, Lombardia, Piemonte and Veneto regions North Italy.

These lists were obtained from a civilian source.

T.J. Barry
Major, C.E.,
Acting Chief Elect. Div.

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Inclosure: 4 lists.

cc: to file 197

0 6 4 3

Declassified E.O. 12356 Section 3.3/NND No. 785019

Sir,

1. There are no further copies of this available in this HQ.

C Hewitt
Capt.

Chief Clerk.

1. Please try to obtain another copy from the Information Div. A.G.C.

This matter also concerns our Elec. Div. but I should like to have it with me when in my office.

[illegible]
1/10

0644

Declassified E.O. 12356 Section 3.3/NND No. 785019

Chief Clerk. Information Division.

Have you a second copy of this which we could have?

No. Hull

Asst. Sec'y
Navy.
P.W.U. Sub. Com.

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