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### ECLAC

Economic Commission for Latin America and the Caribbean

Second Meeting of Experts on Capital Goods Industries in Latin America and the Caribbean, sponsored by the United Nations Industrial Development Organization (UNIDO) and the Economic Commission for Latin America and the Caribbean (ECLAC)

Santiago, Chile, 4 to 6 March 1985



REPORT

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### I. ORGANIZATION OF WORK

### Place and date of meeting

1. The Second Meeting of Emperts on Capital Goods Industries in Latin America was held at ECLAC headquarters in Santiago, Chile, from 4 to 6 March 1985 under the joint sponsorship of UNIDO and ECLAC.

### Attendance

2. It was attended by experts from Argentina, Bolivia, Brazil, Colombia, Chile, Ecuador, Mexico, Paraguay, Peru, the Dominican Republic and Venezuela and by representatives of UNIDO and ECLAC and members of the team working on the ECLAC/UNIDO Regional Capital Goods Project.\*/

### Election of officers

3. The meetings were chaired by Mr. Ricardo Ciruzzi, Under-Secretary for Electric Power of Argentina and President of the Commission of Regional Electrical Integration (CIER). The rapporteur was Mr. Fabian Yaksic, Technical Manager of the Brazilian electric and electronic industry association (ABINEE).

### Agenda

- 4. The participants adopted the following agenda:
  - 1. The demand for capital goods in the sector responsible for electric power generation and distribution in Latin America: possibilities for national participation and regional complementarity in supplies.
  - 2. Scope and machinery for using the purchasing power of the electricity sector in promoting and developing the capital goods industry.
    - 3. Prospects for regional and international co-operation in the production and supply of equipment for generating, transmitting and distributing electrical power.

### II. SUMMARY OF THE DEBATES

- 5. At the opening meeting the floor was taken by the Executive Secretary of ECLAC, Mr. Gustavo Campos-Rademacher of UNIDO and Mr. Carlos Ceruti, Chairman of the First Meeting of Experts on Capital Goods Industries in Latin America.
- 6. The participants had before them documents produced to support their deliberations, other documents of an informative nature and studies prepared by some of the participants or by the bodies they represented. The list of documents is contained in armex 4.

<sup>\*/</sup> See list of participants contained in annex 3.

7. In order to provide the readers of this report with fuller background information, the participants decided to annex to it the conclusions and recommendations of the First ECLAC/UNIDO meeting of experts on capital goods industries and those of the CIER/ECLAC working group on promotion of the use of capital goods and services originating from Latin America and the Caribbean.\*/

### III. CONCLUSIONS AND RECOMMENDATIONS

# A. CONCLUSIONS

- 8. The deliberations of the experts resulted in the following conclusions:
- a) The capital goods industry sector, which provides the means of production for the other industrial sectors, is of vital importance to the development of countries. The mastery of the technology of producing capital goods by national enterprises ensures control over the means of production, which gives the sector a leading role in terms of national objectives and economic and political autonomy. In addition, the technological progress incorporated in the goods produced is disseminated through their purchasers to the rest of the economy, this tending to occur as a chain reaction. This makes it possible to disseminate the process of modernization, which is reflected in higher productivity and in final goods of better quality. The development of the capital goods industries is in itself a basic need for self-sustained economic development.
- b) The production of electrical equipment is of strategical importance in the industrialization efforts made by the Latin American countries, in view of the concentration of the demand for such equipment, the possibility of planning that demand successfully, the diversity of components which make it possible to have complementarity in the activities of producers at different levels of technological development, the relative stability in the demand associated with the inevitable requirements of electricity supply and the fact that the needs for equipment for electricity generation, transmission and distribution extend well beyond the year 2000.
- c) For the period 1980-2000 plans exist to extend the capacity for electric power generation in public service, which amounts to over 140 000 MW in hydraulic plants and over 43 000 MW in thermal plants; there are plans for installing in the period 1980-2000 a total of close to 2 000 hydraulic turbines with an average capacity of 142 MW and 250 thermal units with an average capacity of 172 MW. In the period 1980-1990, it is planned to increase the length of the electrical power transport network by slightly more than 1 000 kilometres and the transformation capacity by approximately 143 000 MW.

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- d) These potential needs represent unusually high purchases, which may amount to close to US\$ 180 billion between 1980 and the year 2000. This figure is the equivalent of over half the region's external debt.
- e) It is therefore important to co-ordinate this extraordinary purchasing power, integrate it and, if possible, unify it. Taken together and concertedly, it will become a means of responding to the current crisis and of developing the region so that the cost of our contracts are fair and reasonable, the highest possible percentage of the manufacturers' wages remain in the countries of the region, conditions are created which encourage people to locate new plants producing equipment in the region and local mastery of technology increases and is consolidated.
- f) All of this means that in so far as possible the investment resources which should be earmarked for the purchase of electrical equipment should be channelled towards the development of the region's industrial capacity. It also means making electrical equipment an instrument of national development and regional integration policies. It also suggests the possibility of financing the indispensable expansion of electric systems at the lowest possible cost in foreign currency while at the same time expanding domestic markets without jeopardizing the conditions of competition for manufacturing firms.
- g) The feasibility of this strategy is particularly evident in view of the fact that in the majority of cases electrical firms requiring equipment are either owned or controlled by the State. The purchasing power this gives to the State represents an effective negotiating instrument for reconciling the market reserves needed to develop local industry with access to the technology controlled by the industrial countries and external financing requirements in a way which is advantageous for the region.
- h) The following are some of the requirements of such a strategy:
  - i) long-term planning of programmes to expand the capacity to generate electricity so that they result in sustained demand for equipment whose local and regional components form the basis of development programmes of capital goods industries and whose imported components provide support in commercial and financial negotiations with countries outside the region;
  - ii) unpackaging the technology involved in each project;
  - iii) disassociating, in so far as possible, the purchase of equipment from the financing of the corresponding investment;
  - iv) active, decisive participation by local entrepreneurs so as to achieve and ensure conditions of competition which keep the social cost of the strategy as low as possible;
  - v) consolidation and growth of the technological expertise of electric companies, basic engineering groups and producers of equipment.
- i) The strategy reflected in the terms outlined above provides different prospects for the development of local industry depending on the various possibilities offered by each country. These prospects would be considerably richer for every country in the region if it were possible to enhance its respective equipment plan and its industrial and technological capacity and the potential for its longterm development. To achieve this objective it is necessary to set up a regional

mechanism with enough political support, intelligence, flexibility and decisionmaking capacity to meet changing circumstances and the need to ensure that the benefits derived will be equitably distributed among the countries concerned.

This position is reflected in the Quito Declaration and Plan of Action of 13 January 1984, in which Latin America, in response to the economic crisis affecting the region, suggested "the need to enhance the efforts of each country" and at subregional level by strengthening regional co-operation and integration". It also incorporates and reiterates the recommendations which emerged from the First Meeting of the Group of Experts held at ECLAC headquarters in December 1983. (These recommendations are contained in annex 1.)

B. RECOMMENDATIONS

9. The recommendations of the meeting of experts refer to the following fields of action: measures for general application, regional co-operation and international co-operation. and the contract of the contra

### Measures for general application

Measures for general application

10. The meeting of experts recommends:

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- That it be reaffirmed that it is both necessary and urgent for governments and development bodies to take into account the substantial capacity of the electricity sector to purchase capital goods and to bear in mind that this capacity should be first and foremost turned to the development of national industries, to the identification of opportunities for Latin American co-operation and to increasing and improving the region's international bargaining power.
- That the role of basic engineering in the formulation and planning of investb) ment projects be strengthened, putting into play the local and regional engineering capacities of manufactures of equipment, consulting firms and electric power companies with the aim of effecting a technological breakup and achieving the following goals:
  - i) increasing the capacity of industries and consulting firms in the electric power sector to participate in the projects being carried out in the

ii) maintaining reasonable continuity of demand so as to ensure the stability and efficiency of local and regional industries;

iii) that a comparison be made among the region's electric power companies and a decision taken as to the best way, from the technological and commercial point of view, of unpackaging the projects;

iv) that in the case of packaged aid, the supplying company should be required to handle the training of the staff of the purchasing companies and to assure the creation or equipment qualification of maintenance facilities over a sufficient period of time.

- c) That the region's electric companies give consideration to the following points in their international tenders:
  - i) the use of Spanish or Portuguese as an official language both in the texts of the tender and in correspondence, when the purchasing country is Spanish or Purtuguese-speaking;
  - ii) the opening of the possibility for local and regional producers to make their commercial offers on the basis of hard currency or alternatively the utilization of price adjustment formulae which actually reflect the cost composition of equipment and take duly into account the corresponding opportunity of payment:
  - iii) the establishment of forms of payment which correspond to the actual disbursement by manufacturers during the period of manufacture, for the purpose of decreasing their financial costs;
  - iv) to ensure that the margins of preference accepted by the rules of the international financial bodies for local suppliers are respected and to apply at least some proportion of these margins to suppliers from other countries in the region;
  - v) to point out that the comparison of offers will be made on the basis of the total on-site cost of the equipment;
  - vi) to establish conditions which tend to minimize the costs to local suppliers derived from guarantees for maintaining their offers since other possibilities exist for sanctioning them;
  - vii) to give priority to the technical standards prevailing in the purchaser's country;
  - viii) to establish clear rules with regard to the criteria applied in evaluating the quality of the goods or services acquired, during their manufacture or supply and on the occasion of the final reception, ensuring that the technical standards agreed upon are met;
    - ix) to simplify the formal requirements relating to legal and financial aspects for the purpose of prequalification of duly registered local enterprises. This recommendation will apply throughout the region once a Latin American register of qualified enterprises is established;
    - x) to indicate the right of the purchaser to request information concerning the cost from the offerer showing that disloyal international trade practices are not reflected in his offer.
- d) That the countries of the region appraise the investment and equipment requirements of the electric energy sector and other basic sectors at pluriannual intervals and that they determine the demand for equipment by related commodity groups.
- e) That mechanisms of finance should be designed which are propitious to the development of capital goods industries and that they meet both the requirements of the production and the sales to the internal market, with the objective of ensuring that local suppliers can adapt the financing of their supplies of equipment and components to the terms offered by suppliers outside the region. In particular, it is recommended that consideration be given to the possibilities of official banks' releasing resources allocated specifically to these ends or that these requirements are included in equipment supply programmes agreed upon with local suppliers.

- f) That the purchasing power of electric power companies should be used to extend external financing to the purchase of capital goods of national origin.
- g) That the terms of financing on which international bodies are insisting should be changed to eliminate clauses or practices, which prevent local industries from participating to a larger degree in the provision of capital goods destined to development projects or, which actually keep them from participating in such transactions.
  - h) That the countries of the region should use their representation on the supervisory bodies of international financial agencies to promote changes in the rules and procedures of such bodies which are contrary to these recommendations.

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- i) That when the possibility of resorting to external financing for the purchase of electrical equipment is under consideration, account should be taken of alternative sources of supply and financing with the objective of enlarging the field of negotiation.
- j) That consideration be given to forms of countertrade among the countries of the region with a view to activating international trade in capital goods equipment.

# Regional co-operation

- 11. In this connection, the Meeting of Experts recommends:
- a) The establishment in the region of a mechanism for co-operation and political action intended to:

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i) promote the balanced development of the capital goods sector;

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- ii) make it possible to implement the region's bargaining capacity.
- b) That a regional financing mechanism should be designed to facilitate intraregional trade in capital goods, stimulating each country's potential for industrial development.
  - c) That UNIDO and ECLAC continue exploring, in consultation with the countries of the region, the possibilities for giving continuity to the exchange of experience and information among Latin American countries in connection with the development of the capital goods industries and of engineering at national and regional levels, by holding periodic meetings of experts and other appropriate mechanisms. In order to ensure this continuity, it is recommended that the next meeting be held during the year 1986.
  - d) That a review be carried out of the legislation of "Buy National" in force in the region and a comparative analysis made of these data.

- e) That the recommendations on promotion of the use of capital goods and services of Latin America adopted by the Central Committee of CIER at its twentieth meeting on 5 December 1984 in Montevideo \*/ be put into practice and supported, as well as those made at the First Meeting of Experts on Capital Goods Industries in Latin America.\*\*/
- f) That closer relations be established among manufacturers of capital goods from the various Latin American countries, with the objective of making progress in industrial complementarity in the production of equipment for the electricity sector and facilitating the dissemination of technology among the countries of the region; to this end it is recommended that support be given to the consolidation of the activities being carried out in this connection by the Latin American Association of Capital Goods Industries (ALABIC).
- g) That, in the light of the experience acquired by regional and international bodies, codes of technical standards applicable to intra-regional trade in capital goods should be drafted.
- h) That a mechanism should be established for standardizing seals of quality in conformity with standards existing in each country of the region, bestowing the necessary trustworthiness on national products bearing those seals.
- i) That the ECLAC Secretariat draw the attention of the governments to the conclusions and recommendations reached at this meeting in the ways it considers to be most appropriate.

### International co-operation

- 12. Since one of the issues envisaged for the Second UNIDO Consultation on the Capital Goods Industries (Stockholm, 10-14 June 1985) relates to the development of the production of electric power equipment in Third World countries, the Meeting of Experts recommends:
- a) That note be taken of the growing importance of Latin America in the world market for hydroelectric power stations equipment.
- b) That priority should be given in the region to establishing a dialogue with the actors of industrialized countries and the other regions concerning the search for approaches to international co-operation which recognize this fact and make it possible for the Latin American industry to participate in the supplies more closely in line with its present manufacturing capacities, its development potential and the magnitude of the demand for this equipment.

<sup>\*/</sup> See annex 2.

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#### Annex 1

CONCLUSIONS AND RECOMMENDATIONS OF THE FIRST ECLAC/UNIDO MEETING OF EXPERTS
ON CAPITAL GOODS INDUSTRIES IN LATIN AMERICA
(Santiago, Chile, 5-7 December 1983)

### Conclusions

- 1. The meeting made it possible to:
  - a) Form an overall picture which allowed national situations to be assessed in terms of the situation in the region as a whole;
  - b) Appreciate the importance of the Latin American capital goods market and the bargaining power which it could give the countries in the region if they were to act in co-ordination with one another;
  - c) Establish contacts which would be highly useful in making the work of both the national projects and the regional project more effective and in orienting the technical assistance provided by international agencies.
- 2. The discussions highlighted the importance of the capital goods production sector and engineering activities:
  - as stimuli to the economy,
  - as creators of jobs,
  - as factors in realizing savings and generating foreign exchange,
  - as elements which guided and furthered the technological progress of the region.
- 3. It became clear that, at least with respect to meeting the demand of the basic sectors already studied by the regional project, a wide range of production activities existed which could be carried out by the medium-sized and many of the small countries of Latin America.
- 4. There was a great deal of concern about the recessionary situation facing the region, which had resulted in the discontinuance of investment projects and in a high level of idle capacity in the machinery and equipment industry and in engineering activities. In conjunction with that situation, a considerable flow of imported capital goods had been maintained which could in large part be provided by manufacturers in the region.
- 5. The importance of the selective economic policy mechanisms which had been identified in the regional project were stressed; particular emphasis was placed on the crucial role of State purchasing, financing and the reservation of markets within a framework of concerted action.

- 6. Except on rare occasions, insufficient financing had been made available for the promotion and utilization of local capital goods capacity. The most obvious shortcomings were the lack of resources and mechanisms for financing sales on the domestic market and the discrimination against local industry stemming from the terms stipulated for the granting of foreign credit, including the credit extended by international financial institutions.
- 7. The State accounted for an extremely large part of the purchases of capital goods and engineering services in all the countries of the region. This buying power had yet to be fully utilized for the development of capital goods and engineering due to the presence of the following circumstances in certain cases:
  - The persistence of import-oriented attitudes on the part of the people in public bodies responsible for designing the projects and taking decisions concerning the acquisition of the capital goods to be used in them;
  - in them;
    The lack of investment programmes encompassing the respective projects which would provide an integrated framework for planning with respect to the provision of machinery and equipment by local sources;
  - Delays in the issuance of information about the preliminary stages of designing and making financial arrangements for such projects, which inhibited the analysis of alternatives that would encourage local participation.
- E. It was observed that the current crisis was part of a radical change in direction affecting the entire world economy, which was accompanied by rapid changes in capital goods technology. Far-reaching modifications in product design, manufacturing methods, the utilization of raw materials and in machinery operating modes must be taken into account if the gap with the industrialized countries was to be prevented from becoming greater.
- 9. It would not be possible to monitor those changes or, most importantly, to master them, without an industrial and engineering structure and a scientific/technical apparatus; those elements were either lacking or inadequately utilized in the developing countries.
- 10. The capital goods production sector had only taken minimal advantage of the possibilities offered by a regional system of protection, and only limited experiments had been carried out at the subregional level.
- 11. Achieving the participation of the capital goods industry was very closely related to the development of the various facets of engineering in the region (the basic, process, product and manufacturing branches of engineering). To a greater or lesser degree, the dependence on all aspects of extra-regional engineering was still excessive in the countries of the region.

- 12. The participants were in agreement in assigning the greatest and most immediate priority to the sector of electrical power generation in relation to the opportunities opening up to the capital goods industry in the region. Its priority was based on the fact that:
  - public enterprises made up the majority of the sector;
  - the volume of its equipment purchases was highly concentrated and regular;
  - the level of investment exhibited a greater relative stability over time;
  - the demand for equipment used in generating hydroelectricity was evenly distributed among the various countries of the region, including the small and medium-sized nations.
- 13. Attention was drawn to the growing importance of organizations devoted specifically to the promotion of the capital goods industry and engineering in the various countries of the region and to their successfulness.

### Recommendations

In view of all the foregoing points, the meeting of experts recommended that:

- 1. Entities or mechanisms specifically aimed at sectoral promotion should be established within the institutional and legal framework of each country of the region to serve as forums in which representatives of the public and private sectors could discuss the various aspects of local participation in engineering projects and in the provision of capital goods.
- 2. The entities mentioned in the preceding paragraph should join together in a regional organization.
- 3. Resources should be allocated at the national level and domestic financing mechanisms should be designed for the sale of locally-produced capital goods.
- 4. The investment financing terms established by international agencies should be reformulated in order to eliminate clauses or practices preventing local industries from playing a greater role in providing capital goods for those projects.
- 5. The existing conditions should be studied in order to find a way to use regional protection mechanisms to promote the participation of local production in meeting the equipment needs of the various countries.
- 6. Governments should be made aware of the paramount importance of electrical power generation as a pilot sector in which Latin American capital goods, engineering and consulting capacities could be utilized under an appropriate system of reciprocity aimed at maximizing the participation of all the countries, especially the small and medium-sized nations.
- 7. In view of the need for Latin American countries to adopt marketing mechanisms and practices suited to the conditions under which capital goods were usually traded in their own and export markets, international agencies should furnish information on this subject and include it in their technical assistance programmes.

- UNIDO and ECLAC should explore possible channels for continuing the exchange of experiences and information among the Latin American countries concerning the development of the capital goods industry and engineering at the national and regional levels by means of periodic meetings of experts and other suitable mechanisms.
- In order to ensure the continuance of the activities referred to in the preceding paragraph, the first such meeting should be held in the course of the coming year, and its agenda should include a review of the progress made in the areas discussed at the present meeting and in others which might subsequently be set forth, both at the national and regional levels.
- The ECLAC Secretariat should bring the conclusions and recommendations of the meeting to the attention of the governments by the means it deemed most appropriate for that purpose. a and street has been a

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## Annex, 2 i digitali di sulla di sulla Annex, 2 i di sulla di sulla

Resolutions adopted at the twentieth meeting of the Central Committee of the Regional Electrical Integration Commission (CIER) (Montevideo, 5 December 1984) by the official delegates of the national committees of Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru and Uruguay.

### \*+\*+\*+\*+\*

- 8a) With regard to the first meeting of the CIER/ECLAC Working Group on "Promotion of the use of capital goods and services originating from Latin America and the Caribbean", held in Santiago, Chile, from 16 to 18 October 1984, the following decisions were arrived at:
  - In order to facilitate the participation of local and regional industry in the supply of equipment and services, it is recommended that electricity enterprises and bodies of the sector should give positive consideration to such participation from the conception and design stage of projects onwards.
  - In addition it is recommended that invitations for tenders should be broken down into items of such a nature as to allow local and regional suppliers to participate in a competitive manner.
  - As a contribution to the goods and services-producing sector of the region and to the future functioning of the Latin American Energy Information System (SIELA), it is also recommended that:
    - a) Information on invitations to tender should be disseminated at the regional level in an effective and timely manner;
    - b) In order to achieve this, a body should be designated in each country of the region to be responsible for compiling and disseminating such information; for this purpose, the responsible body would have the task of transmitting the information to the corresponding organizations in the region and disseminating the information received to the associations of producers of goods and services in its own country;
    - c) The names of enterprises which win tender competitions should be included in this information system;
    - d) The body in question should inform suppliers of the potential demand for goods and services in the electrical sector of the region.
  - It is considered desirable that in tender documents the buyer should explicitly state his intention of maintaining active contact with enterprises of the region regarding the acquisition of the goods and services needed. In addition, clauses should be included which encourage participation by local and regional firms, while any provisions which tend to restrict such participation should be avoided.

- It is recommended that, other conditions being equal, purchasers should give preference to those offers which include the biggest proportion of goods and services coming from the region.
- In view of the difficulty of obtaining international financing for investment projects in the electrical sector, its heavy capital requirements, and the conditions and terms imposed in the international capital market, it is recommended that:
  - a) Support should be given to the establishment of Latin American mechanisms or institutions for the provision of long-term credit for financing such investments;
- b) Approaches should be made to the existing international credit organizations with a view to the flexibilization and adaptation of their operations to the needs of electrical enterprises and specially the promotion of the use of capital goods and services coming from the region; ing the administration of the first transfer of
- c) Encouragement should be given to forms of international trade which assist in the financing of electricity sector investment projects, such as compensated trade and the opening of new markets for traditional and non-traditional exports.
- It is also recommended that initiatives should be intensified in the region with the aim of promoting industrial and technological complementation among Latin American capital goods and services producers, in order to increase their possibilities for participating in the execution of investment projects in the electricity sector.

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#### Annex 3

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### Annex 4

### List of documents

### A. Support documents

- ~ CEPAL/ONUDI, Temario provisional y notas sobre la reunión y el temario. LC/R.407 (SEM.21/1)
- Declaración de Quito y Plan de Acción de Quito. Conferencia Económica Latinoamericana, Quito, 9 al 13 de enero de 1984
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### B. Information documents

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- CEPAL, Generación de energía eléctrica. Estudio de posibilidades de fabricación local de equipos (E/CEPAL/G.1312)
- CEPAL, Demanda de turbinas hidráulicas en algunos países latinoamericanos en centrales que entran en operación en el período 1980-1990 (LC/R.381)
- CEPAL, El comercio exterior de los bienes de capital relevantes para el sector eléctrico 1979/1982. Elaboración estadística. Documento informativo.
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- CONDIBIECA-ONUDI, Análisis de la oferta y demanda de equipos eléctricos en Venezuela, II Jornada de Análisis de la Industria de Bienes de Capital, noviembre de 1984, Puerto Ordaz, Venezuela
- Lima, Luis Alberto, Estrategia para el fortalecimiento de la industria de bienes de capital en el Paraguay, 2º Congreso de Industriales del Paraguay, octubre de 1984.
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- Mello, Henrique, Experiencia Brasileira no Ambito do Setor Elétrico, Segunda Reunión de Expertos en Industrias de Bienes de Capital, Rio de Janeiro, 1985

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