The Lahore Electric Supply Company Limited, Lahore

NEW LIGHTS FOR OLD.

''A history of the progress and development of the Lahore Electric Supply Company over a period of First twenty-eight years.''

Lahore Electric Supply Company Limited

Board of Directors

1- Rai Bahadur Lala Sohan Lal,M.L.A.-Chairman

2- Dewan Bahadur Dewan Krishna Kishore Dahriwala

3- L.Mulk Raj Aggarwal

4- Mr. Rajendra Kumar Jain

5- Dewan Hari Krishna Das

6- Mr. shriyans Prasad Jain

7- L. Sardari Lal

Subsidiary Companies of The Lahore Electric supply Company, Limited.

LESCO CHEMICAL WORKS LIMITED

Board of Directors

Chairman

1. Rai Bahadur Lala Sohan Lal, M.L.A.

Directors

2. Nawab Sir Liaqat Hyat Khan, K.B.E. , K.B.
3. Sir William Roberts, Kt., C.I.E., M.L.A
4. Nawab Muzaffar Khan, C.I.E., K.B., M.L.A.
5. Dewan Bahadur Dewan Krishna Kishore Dahriwala
6. Mr. Rajendra Kumar Jain
7. Sardar Bahadur Sardar Ujjal Singh,M.L.A
8. Mr. Shriyans Prasad Jain
9. Lala Sardari Lal
10. Dewan Hari Krishna Dass
11. Lala Mulk Raj Aggarwal

Farrukhabad Electric Supply Company Limited

(United Provinces)

Board of Directors

Chairman

1. Rai Bahadur Lala Sohan Lal, M.L.A

DIRECTORS

2. Sir J.P. Srivastava, Kt., M.L.A.
3. Dewan Bahadur Dewan Krishna Kishore Dahriwala
4. Mr. Rajendra Kumar Jain
5. Lala Mulk Raj aggarwal
6. Lala Sardari Lal
7. Mr. M.R. Kohli, M.A., F.I.B (London)

Peshawar Electric Supply Company , Limited

Board of Directors

Chairman

1. Rai Bahadur Lala sohan Lal, M.L.A.

Directors.

1. Rai Bahadur Lala sohan Lal, M.L.A
2. Dewan Bahadur Dewan Krishna Kishore Dahriwala
3. Lala Mulk Raj Aggarwal

4. Mr. K.M. Aslam, Advocate

5. Rai Bahadur Lala Ram Nath Lambah, Municipal Commissioner

Sialkot Electric Supply Company, Limited

Board of Directors

Chairman

1. Rai Bahadur Lala sohan Lal, M.L.A.

Directors

2. Dewan Bahadur Dewan Krishna Kishore Dahriwala

3. Mr. Rajendra Kumar Jain

4. Rai Bahadur Dewan Charan Das, Advocate

5. Lala Nagina Lal Jain, Pleader

Larkana Electric supply company Limited(Sind)

Board Of Directors

Chairman

1. Rai BHahadur Lala Sohan Lal, M.L.A.

Directors

2. Lala Mulk Raj aggarwal

3. Dewan Hari Krishna Das

4. Mr. K.M. Panjabi, Public Prosecutor

5. Mr. T.M Sipi, Accountant, District Local Board

Rohtak & Hissar Districts Electric Supply Co., Ltd.

Board Of Directors.

Chairman

1. Rai Bahadur Lala Sohan Lal, M.L.A.

DIRECTORS

2. Mr. Rajendra Kumar Jain
3. Mr. shriyans Prasad Jain
4. Pandit Thakar Das Bhargava Advocate

Central India Electric supply company, Limited

Central Provinces.

Board Of Directors

Chairman

1. Rai Bahadur Lala Sohan Lal, M.L.A.

DIRECTORS

2. Dewan Hari Krishna Das
3. Mr. Shriyans Prasad Jain

THE LAHORE ELECTRIC SUPPLY COMPANY LIMITED

Staff Officers.

Chief Engineer.	Mr. B. Paul, BSc (Glasgow),AM.I.E.E.(London), A.A.I.E.E. (America)
General Secretary.	L. Ganga Ram
Power House Supdt., Lahore	Mr. D.D. Sharma, B.Sc, Civil & Electrical (Bristol), A A.I.E.E. (America) A.M.I.E. (India) (First Class engineer)
Secretary Lahore.	Mr. J.D. Khosla, B.S.E (USA)
Executive Engineer Lahore	Mr. S.A Prabbu, B.Sc (Benares), B.Sc, London
Executive Engineer	L Ram Das Kalra, A.I.E.E (London) A.A.I.E.E. (America)
Out station	(First Class engineer)
Supdt. Maintenance &	S. Prehlad singh
Distribution Deptt.	
Supdt, Line Construction	S.N. Jassawala, Esq.
Department	
Supdt Sub-stations.	S. Chanchal singh L.E.E. (Bombay)
Supdt. Law.	L. Mehar Chand Bhalla, B.A., L.L.B
Supdt. Sales.	L. Munshi Ram Dalla
General Assistant	Mr. Pran Nath Mehta, B. A., D.D.C. (Dip.) LL.B.

CHAPTER I

AN INDIA IS BORN

This is the story of an idea; the story of the Lahore Electric supply Company over a Period of twenty-eight years and behind the facts and figures which make up that story, is an exclusive tale of endurance, of struggle against great odds, and of final achievement. It is a tale of progress in a comparatively unprogressive land; and in the pages that follow is described how new light was given to the people of the Punjab- the oil lamp, the candle and the lantern were eliminated, how the ''Punkah'' said last farewell, and above all how came in the industrial development with the help of that greatest of all scientific marvels—ELECTRICITY.

CHAPTER II

EARLY HISTORY

The advent of electricity in Indi was heralded by the Darjeeling Municipality in 1897 by the installation of a hydro-electric generating plant. For this purpose they secured the services of the Late Mr. J.W. Meares, who later rose to be the Electric advisor to the Government of India. The example set by Bengal's summer capital moved the two presidency towns to undertake the venture, but it was not till 10 years later that the movement was initiated there to replace the old oil lamp. It was also about this time that the proposal to bring electricity to Lahore was first mooted. Several firms thought of undertaking the venture but for one reason or the other they all gave up the idea.

The Lahore Municipality then interested itself and a scheme was drawn up for them by a British firm. Kennedy and Jenkins of Westminster. The total cost of the scheme was estimated to be $35, for meeting a demand of 8,500 lights and 1,600fans only. It involved the construction of two power stations, one near Robert Road and the other at Charing Cross. The City fathers were divided on this issue, some favoring the electrification of the civil area first and others favoring the walled city area. The Municipality, however, considered the scheme expensive and eventually dropped it

PUNJAB GOERNMENT'S INITIATIVE

The Punjab Government, however, were anxious to introduce electricity in the province and despairing of any one coming forward to undertake such a scheme, they took the initiative of installing small generating plants in some of their buildings in Lahore. One plant was installed in the Government House, another in the Secretariat, a third in the Central Jail and one on the Mall for supplying some buildings there and the Montgomery Hall. Nedou's Hotel , Charing Cross Hotel (now the Falettis Hotel) and the Punjab Club quickly followed suit. The plants how-ever proved more of an anxiety than a convenience on account of the attention they required and unreliability of supply.

TENDERS INVITED

After their short experience of these small '' ghar ka bijlighars'' the Government threw up the sponge and advertised for tenders to supply electricity to Government buildings. They also gave the assurance that the successful tenderer would be granted a licence to supply electricity to the town of Lahore. The advertisement which appeared in a local newspaper on September 25, 1910 read as follows;-

''ELECTRIC LIGHTING OF LAHORE.''

'' Tenders are invited from registered companies for the concession for the supply of electric power for lights and fans in Government Buildings at Lahore. Full particulars can be obtained from the Sanitary Engineer to Government, Punjab, P.W.D., Lahore. Tenders will be received up to Ist March, 1911.'' Among the tenderers , first and foremost was the Lahore Municipality, undeterred by the fate of its previous venture. Firms of experience , like the Dehli Electric Tramways and Lighting Co., Ltd. (now Known as the Delhi Electric Supply & Traction Co., Ltd.) Messrs. Balmer Lawrie & Co., Messrs. Octavius Steel Co., and a few other British firms also entered the field.

L. HARKISHEN LAL IN THE FIELD

The Delhi Electric Tramways and Lighting Company, Limited being engaged in a similar business, had the best chance of securing the licence; but for reason best known to the London Office of that company, they decided to withdraw. Lala Harkishen Lal was at the time a director of the Local Board of the Delhi Electric Tramways and Lighting Company, Limited. When the decision of the London office of that company became known to him on February, 24, 1911, only four days were left for the submission of tenders. With his characteristic genius for quick decision, Lala Harkishen Lal decided t o take up the matter and for purpose associated himself with the Hon'ble Mr.James Currie, of Messrs. James Currie & Co., who was the founder of the Punjab Chamber of Commerce and was also a director of the Delhi Electric Tramways & Lighting Company, Limited

TENDER ACCEPTED

A tender was immediately drawn up and submitted in the name of Lala Harkishen Lal's ank, the (old) people 's Bank of India , Ltd. Advantage was taken of the scheme worked out by the Delhi Electric Tramways and Lighting Company, Limited . A copy of the tender is given in Appendix I. An interesting feature of the tender was the penalty proposed by the government for a failure of supply of over 15 minutes duration. The penalty ranged from Rs. 25 to Rs. 200 for every failure after the first five failures. Such conditions are unheard of in these days. They were persumably based on the unhappy experience of the government in working their small generating plants.

The tender was accepted on July, 7, 1911, in the following terms:--

PUBLIC WORKS DEPARTMENT PUNJAB.

BUILDING AND ROADS BRANCH.

FROM

MR. EDWIN O. GILBERT,

EXECUTIVE ENGINEER,

II Lahore Provincial Division.

No. 1750.

To

The Manager,

Peoples' Bank of India, Ltd.,

Lahore.

Dated 7th July, 1911.

Subject:

SUPPLY OF ELECTRIC POWER AND LIGHT TO THE LAHORE MUNICIPALITY.

GENTLEMAN,

With reference to your letter dated 28th February, 1911, to the sanitary Engineer to Government, Punjab, P.W.D.,I have the honor to inform you that your tender for the supply of electric power and light to the Lahore Municipality has been accepted by the Secretary to Government, Punjab, P.W.D. Buildings and Roads Branch vide his letter No. 333 G.S. of 29th June, 1911, to the Superintending Engineer, Third Circle, Lahore . You should now apply to the Local Government in the Civil Department for the grant of a licence within one month of date of acceptance, vide clause 23 of your tender.

Yours faithfully,

(Sd.) EDWIN O. GILBERT,

EXECUTIVE ENGINEER,

II Lahore Provincial Division.

In response to the above letter the Bank made the formal application for the grant of license on July 24, 1911.

One of the conditions of the tenders invited by the Punjab Government, was that the successful tenderer should take over the generating plant belonging to the Government would not sell the plant, but would hire out mains and poles to the licensee, if they so desired.

NEGOTIATIONS FOR THE PLANT

The promoters then made efforts to negotiate for the purchase of a suitable plant. In December, 1911, an offer for the sale of a complete electric generating plant, then in use at Delhi Durbar, was made by the Executive Engineer, Lower Bari Doab Canal, Balloki to Lal Harkishen Lal. The negotiations for this were completed at Delhi on December 23, 1911, between Lala Harkishen Lal and the Irrigation Branch of the Punjab Government. The total cost of the entire plant, which was installed for the Delhi Durbar held in 1911, amounted to Rs. 1,61,107. This consisted of four Bellis and Morcom triple expansion steamengine generating sets of 150 Kilowatts each, four Babcock and Wilcox Patent marine type water tube boilers, together with all necessary auxiliaries. The plaint was of the latest type in those days, the boiler pressure being 160 lb. and the engine speed of 500 revolutions per minute being about the maximum that could with safety be used at that time.

As soon as the Durbar was over, the plant was taken over by the People's Bank. Land for the power house and office was obtained on lease from the Public Works Department in its compound on Mcleod Road. (This land containued to be the focus of the entire working of the company for about a decade and a half, after which the increasing volume of the Company's work obliged it to acquire moer accommodation. It still houses the technical offices of the company as well as the Mcleod Road sub-station, and also remnants of the old power house, which are still kept in perfect working condition). The electric lines and poles then existing on the Mall and belonging to the Government were also purchased by the Bank for Rs. 17,000. The erection of the machinery and distribution mains was then taken in hand in anticipation of the grant of the licence, under the guidance and supervision of Mr. James Jensen in consultation with Mr. J.S Pitkeathely (now Sir James Scott Pitkeathely, K.C.I.E, C.M.G, C.V.O, C.B.E, D.S.O, M.I.M.E, A.M.I.E.E., M.I.E, (Ind.), both of the Delhi Durbar staff.

LAHORE ELECTRIC SUPPLY CO., LTD

FOUNDED

In February, 1912 the Lahore Electric Supply Company was formed with a capital of Rs. 5,00,000. The Company was registered on March 21, 1912. Lala Harkishen Lal became the first Chairman of the Board of Directors of the Company And the first Directors were:-

The Hon'ble Lala Harkishen Lal

The Hon'ble Mr. James Currie

Lala Ganpat Rai, Bar-at-Law

R.B.L Ram Saran Das

R.B Lala Mohan Lal

R.S.L. Balmukand

R.S.L Niranjan Dass

K.S.M Seraj Din, and

Lala Mool Chand

Mr. James Jensen was appointed the General Manager.

The Company had also the benefit of the advice of Mr. J.G.Griffin, General Manager of the Delhi Electric Tramways and Lighting Company Ltd. The was the author of the original scheme for the electrification of Lahore, prepared in the first instance, for his own principals. He continued to evince active interest in this Company for many years.

PERIOD OF LICENCE

While construction jobs were proceeding apace, the application for the licence was wending its way through the tortuous path of official routine. The company, animated by the optimistic spirit which had made it rush in where experienced and wealthy engineering firms had feared to tread, asked for a licence for 50 years, the maximum period allowed under the law. The Government, however, would agree to a grant of the licence for 30 years only. The reasons assigned for the decision were significant. It was said that "His Honour the lieutenant Governor is unable at present to extend the period of 30 years entered in clause 5 (1) line 6 of the draft licence. But if, at any time, it is contemplated t o alter the nature of the present source of supply, and largely extend operations, the Directors should then approach the Local Government with a view to securing an extension of the term now proposed." With this decision the Company had to rest content and the licence was granted to them.

CHAPTER III

COMMENCEMENT OF SUPPLY

The construction of the equipment having been completed, supply was commenced on November, 18 1912 though the grant of the licence was not formally gazette till full seven days later. (A copy of the Punjab Government Gazette Notification dated November 25, 1912, will be found in Appendix II). The opening ceremony was performed in the Gol Bagh by the then Lieutenant Governor, His Honour Sir Louis Dane. The gardens lights, a unique spectacle for the citizens of Lahore.

In asking His Honour to switch on the electric current, Lala Harkishen Lal said "In view of the keen interest that Your Honour always shows in the industrial movements of the province and more especially in this particular scheme, the Directors feel sure that if will give Your Honour real pleasure to perform the ceremony and for that reason they decide to ask you to join us today in the inauguration of this venture. With the co-operation of the Government, the Municipality and the leading citizens of Lahore, the Directors hope that the Company will do well, and in, in time, pay a good dividend to its shareholders. It may please them to know that the cost of construction has been much under the estimate.

H.H. Sir Louis Dane, in switching on the supply said "In the address, which you have just beard, a full account has been given of how the Lahore Electric Supply Company has been formed. The motto of the Punjab University is Ex. Oriental Lux, which means Light from the East. In the present instance the people of Lahore are acting up to that motto. The scheme for lighting Lahore by electricity has been practically hawked about in every possible market to find someone sufficiently public-spirited to take it up. It was, however, an enterprise to be carried through by the Indian people themselves and I am glad to think that when European concerns had declined to have anything to do with it, and when even the Municipality had decided against it, the man was not wanting in Lahore to take up the scheme and carry it through successfully. It is mainly owing to the initiative of Mr. Harkishen Lal that the scheme had been so successfully initiated. The scheme was backed originally by the People's Bank; this caused some doubts, but when my legal advisors, had satisfied their extremely scrupulous consciences, I was only too pleased to sanction the Bank's application.

The Chairman and Directors of the Company then entertained the elite of the city at a garden party.

ELECTRIFICATION

The Government buildings were the first to be electrified. Applications for connections poured in fast. Within a few months (upto the close of the financial year ending March 31, 1913).

The number of consumers had reached 98. By the next year the figure reached 542, and in the subsequent year rose to 884. The Company this short time was able to wipe out all initial expenses and even declared a handsome dividend of 7-1/2 per cent.

In the year 1913 R.B.L Balmukand died. His place in the directorate was filed in by D.B.D Krishan Kishore Dahriwala.

CHAPTER IV

THE GREAT WAR (1914-1919) AND THE COMPANY

In the next few years the Company made rapid progress; but soon its period of trial and tribulations started. A major breakdown in its plant occurred. One of the steam engine generating sets gave way and its replacement parts could be imported only from England. The Great War had broken out and supplies from overseas were difficult to arrange. However, with the strenuous efforts of the Company, the necessary parts were obtained and the engine was recommissioned.

INCEASING DEMAND

In the meantime, the increasing demand for electricity presented a problem which defied solution. The demand was far in excess of the capacity of the existing plant and the import of new plant from England was out of question till the conclusion of the War. Two steam-engine generating sets of 228 Kilowatts each and one Babcock and Wilcox marine type water tube boiler, together with various accessories, were available from Calcutta and they were purchased a cost of Rs. 18,000. With these the Company expected to cope with the increasing demand for the duration of the War. On arrival, the plant was found to be defective in many respects. Orders for replacements were immediately placed with the manufacturers in England.

Owing to the War, however, the orders could not be executed promptly and the spare parts were not received till the end of 1917. In spite of these difficulties the Company, by rigid economy and careful husbanding of its resources, managed to declare a dividend of 9 per cent for the year 1915-16.

NEW SCHEME

Howsoever difficult it was in those days to venture on new schemes, the Company did not rest on what it had achieved. In 1915 a scheme for the electrification of the old city of Lahore was drawn up. The proposal was to have an Alternating Current 6600 volt generator driven by a Diesel Engine in the Power House and to lay an underground cable to a step-down transformer sub-station in the city. It was also decided to install a rotary convertor in the Power House to enable the new Alternating Current generator to be used, if required, for the normal Direct Current supply to the civil station, and similarly to enable the existing Direct Current generating sets to be used for transmitting Alternating Current supply to the city, if the Alternating Current generator tailed.

OPPOSITION TO ALTERNATING CURRENT

In those days Alternating Current supply for domestic use was looked upon with suspicion and was regarded as a more or less virulent form of electricity. There was, therefore, opposition to the proposal. Even the Municipality demurred in providing the necessary land for the city sub-station. With tact and patience, all objections were smoothed over and a piece of land in Lauge Mandi was obtained on lease. The Company can justly claim to have blazed the trail of Alternating Current supply in cities of the Punjab in particular and in Northern India in general. In those days in India the Alternating Current system was confined almost to hydro-electric undertakings where the distance between the sites of preduction and consumption rendered Direct Current supply impracticable.

The Company ordered out one 150 Kilowatt Diesel generating set from the British Westinghouse Electric and Manufacturing Company Limited, one 150 Kilowatt rotary convertor and the necessary

transformers from the British Thomson Houston Co., Ltd., and the high tension underground cable from Calendar cable and Construction Co., Ltd. The latter company was awarded the contract for laying the cable, which was laid solid in bitumen in earthen troughs.

The rotary convertor and transformers were delivered to the Company. The transmission cable was also received and laid in the ground. The distribution lines in the city for Alternating Current were also laid. The generating plant was ready for dispatch from the manufacturer's works. At this stage the British War Ministry commandeered the generating plant. The scheme, therefore, fell through.

ON WITH THE SHOW

The Company made the best of a bad bargain and arranged to given Direct Current supply to the city by extending mains from the civil station and converting the distribution mains from Alternating Current system to the Director Current System about the end of December, 1916. The source of Direct Current supply being too far from the city area, the supply within the walled city was defective. It was then decided to continue the Direct Current supply in the city by converting the Alternating Current supply generated at the Mcleod Road Power House by making some make-shift arrangement. This was helped by the 6600-volt underground cable already laid between Mcleod Road Power House and Lauge Mandi sub-station and the rotary convertor already erected at the latter place. A low tension alternator, which was received with the Durbar plant from the Irrigation Department, replaced the D.C generator of one of the generating sets in use. The Alternating Current from this set was then stepped up to high tension and transmitted by the underground cable to the city sub-station and was converted into Direct Current by means of the rotary convertor.

In 1917 and 1918 the Company was able to declare a dividend of 12 per cent. During these years the demand for energy exceeded the available supply capacity. The War had concluded, but new machinery was still not easily obtainable. The Company, however, succeeded in purchasing locally two Babcock and Wilcox water tube boilers, complete with mechanical stokers. Additional generating sets were not found till 1920 when one 300 kilowatt steam-engine set was obtained from England. In the same year, two new Lancashire boilers, one induced draft fan, super-heaters and economizers were ordered out and put into service the next year.

INTO THE FUTURE

REORGANIZATION SCHEMES

Towards the close of the year 1918, the Company decided to re-organize and a scheme was prepared to provide an up-to-date electric supply scheme in order to meet all requirements of the future, including the municipal street lighting and the requirements of Lahore Cantonment. A plot of land was purchased at Badami Bagh for an up-to-date central power station. The Military Authorities, however, dis-approved of the proposed central station site at Badami Bagh. They desired, for military reasons, that a site nearer the Cantonment should be selected. It was therefore , decided to have a site on Mayo Road, but until 1920 no site could be secured owing to prolonged correspondence that look place between the company and the Military Authorities, on the one hand, and the Company and the Government, on the other, on the subject.

MARTIAL LAW DAYS.

While the Company was engaged in giving practical shape to its new development scheme, political disturbances in the Punjab deprived the Company of the guidance of Lal Harkishen Lal, who was arrested under the martial law. He was succeeded as Chairman of the Company by one of his colleagues on the Board of Directors, Rai Bahadur Lal Mohan Lal whose son, Rai Bahaddur Lal Sohan Lal, M.L.A., is now the Chairman. Rai Bahadur Lala Mohan Lal piloted the ship of the Company in the midst of troubled waters with characteristic courage and foresightedness. During the martial law the Company maintained an un-interrupted supply of current for which the Punjab Government expresses their appreciation in the following letter:-

LAHORE.

19th April, 1919.

MY DEAR R.B.BOHAN LAL.,

I write to ask you to convey to your Manager Mr. G.R. Drummond and his Assistant Mr. W. Bull, and to the loyal staff, my thanks for the loyal way they kept the power plant at work during a time of great stress and public excitement.

The Civil and Military authorities are, I am sure, also more than grateful to them for maintaining the lighting of Lahore, which conduced in a large measure to the efficient patrolling of the stress and city.

I shall be obliged if this letter be placed before your next Board meeting and, if thought fit, a resolution framed on these lines be recorded and placed on your file.

Yours sincerely,

(Sd). A. S. MONTGOMERY,

Secretary to Government, P.W.D

Lal Harkishen Lal, on being released from prison, resumed the Chairmanship of the Company. In the same year (1919), one of the founder-Directors of the Company, the Hon'ble Mr. James Currie, died. Rai Bahadur Lal Nirangan Dass and Rai Bahadur Lal Ram Saran Das retired from the Board and were not reelected by the share-holders.

CHAPTER V.

THE NEXT DECADE.

1919-1929

The next decade in the life of the Company was a time of real triumph. How it emerged triumphant and grew from strength to strength is a personal tribute to the genius of the then Directors of the Company.

The Great War had just concluded. In spite of the best efforts of the directors, it was not possible to secure immediately new plant to meet the growing demand for electricity, which was jumping in leaps and bounds. The running costs soared high. The chief raw material, coal, used for generating energy rose to about Rs.18 ton at pit-head as compared with Rs. 4 per ton in normal times, Railway freight had nearly doubled and transport wagons were scarce. The management faced all these difficulties boldly and ultimately came out with flying colours. The Company was making all efforts to secure the necessary plant when a letter from the Director of Industries of the Punjab Government, enclosing the copy of a letter dated March 26, 1920, addressed by Colonel Battey to Mr. Montgomery, Secretary to Punjab Government , Public Works Department, advising the Company not to spend money on new machinery and to wait for the Sutlej Hydro-Electric scheme for five to six years, left the on tender hooks. The letter also suggested that in the mean time the Company should take power from the North Western Railway in bulk. It definitely stated that the Railway in the near future would be able to supply no less than 2,000 kilowatts and the supply would be available for several years.

The Company, however, was advised by Mr. Eastgate, then Electric Inspector to the Government, that it should not consider the Hydro-Electric Scheme at all as it would be a long time before energy was actually available. The Company should so arrange their distribution system that it might be serviceable when the Hydro-Electric scheme matured. Acting on this advice, the Company decided to proceed with its extension scheme of 1919.

His Honour the Lieutenant-Governor Sir Edward Maclagan, who took a keen interest in the affairs of Company, paid a visit to the Company's works on February 10, 1920, and discussed with the Directors the new development scheme, plans for which had already been prepared by the then General Manager, Mr. G.R. Drummond. Briefly, it was intended to produce power at the central station to be situated on Mayo Road, in proximity to the Railway powerhouse, and to transmit it to five sub-stations located in the city and civil station. It was also intended to extend this supply to the Lahore Cantonment,

whose requirements were estimated to be about 1,500 Kilowatts.

NEGOTIATIONS WITH N.W.R.

However, in view of the Government's proposal, the Company applied to the Agent, North Western Railway for power in bulk for five or six years and enquired as to rates and conditions. In reply the Company received a copy of the Agent's letter to the Railway Board and the Punjab Government, proposing a joint Power Station.

The Company examined the question microscopically and reached an irresistible conclusion that the basis adopted for running such a scheme was fundamentally wrong. Various such schemes have been taken by the Government and semi-Government institutions at different times and at difference places with the same result. The prohibitive cost and the preposterous maintenance expenditure have always been the bane of such schemes. Political theories favoring nationalization of such schemes may sound quite attractive in the newspaper columns or on the political platform. But coming to grips with the problem, the only inference that can be drawn is, that such schemes can only run properly and economically as a private enterprise. The Governments can save huge amounts of money by permitting them to be worked by sound private parties, which saving can be usefully spent on their beneficent public activities. Exactly under the same circumstances the Company found itself unable to join the scheme put forth by the Government of Punjab and North Western Railway and regretfully withdrew.

Later, the Company approached the Railway with the request that they should give a small supply between the hours of 5 p.m. and 10 p.m. The Agent in his letter of October 25, 1920, offered, up to a maximum of 400 kilowatts between 5 p.m. and 6 a.m. from November I, 1920 to April, 1, 1921, chargeable at a rate of three annas per unit provided that the Company laid their own transmission lines from the Railway's Power House to the Company's Power House. This alone was estimated to cost Rs.1,83,200. The idea was abandoned.

The Company then made another attempt to come to terms with the Railway for a bulk supply for two years. The discussions, however, went on for two years without coming to a finality. Since the existing plant in the Railway Power House was not sufficient to meet the extra demand, it was necessary to buy more plant and thus a third party, the Metropolitan Vickers Electrical Co., Ltd., who were to supply the extra plant to the Railway and also the necessary sub-station transmission and distribution gear to the Company, entered the field of discussion. Various conferences were held under the aegis of the Government between the Company's Chairman, the Agent of the Railway, the representative of Metropolitan Vickers, and the Director of Industries. Initially a rate of 15 pies per unit was agreed upon all round. As negotiations progressed, however, the Railway seemed to consider that they had the upper hand, since no other sources of power was available, and raised the price to 22 pies per unit.

This naturally made the Company pause and consider, Twenty-two pies per unit might perhaps have been agreed to purely as a temporary measure to tide over the difficult period, but to tie themselves to this rate for a long period was considered suicidal, since the tightness of the market was bound to cse in due course. Moreover, the voltage of generation of the Railway Power House was 3,300 and the Railway

would only agree to supply at that voltage. This was uneconomical for a system of the size of Lahore and the Company would, therefore, have had to bear the cost of an extra step-up transformer substation.

IMPROVING THE SUPPLY

The Company, under the circumstances, broke off the negotiations. The Company, However, during this time had not been idle and had explored other means to improve the supply while engaged in the negotiations. They were able to erect and put in use the 300 kilowatts steam engine generating set purchased in 1920. Through the good offices of Mr. Griffin of the Delhi Electric Supply and Traction Company, who, though retired and settled in England, continued to evince interest in the Company's affairs, the Company managed to purchase a larger triple expansion steam engine generating set from Ruston and Hornsby, England. This was the largest generating set so far installed by the Company. To make room for it in the engine room, one of the original sets was dismantled.

In the following year, 1922, two new large water tube boilers were also purchased from John Thompson Water Tube Boilers Ltd., Wolverhampton. The existing boiler plant was, however, adequate. One of the Lancashire boilers was fitted with an improved coal burning device, called a Turbine Furnace manufactured by the Turbine Furnace Company, which enabled coal dust, which is ordinarily wasted, to be utilized. The new boilers, therefo4e, were kept lying in the godowns of the Company and were never erected. Ultimately they were transferred to subsidiary companies later established by the Company at Sialkot and Peshawar.

The installation of the larger generating set and other improvements that were carried out appeased the situation. The total installed capacity had risen to 1560 kilowatts while the peak demand was about 750 kilowatts and the number of consumers 2660.

CANAL HYDRO SCHEME

During this time, at the suggestions of the Punjab Government, a scheme to get electric supply from Canal Hydro Power was put in by the Punjab Hydro Electric and Industry Development Association. The aim of the Association was to exploit the potential sources of power in the Punjab canals and sell the power to electric supply companies. Owing to the nature of the sources of power the Association was not willing to undertake any town electrification scheme in its own hands, since it was not practicable to close down the supply to a town during the period the canals were dry. The Association negotiated for exploitation rights on suitable canal falls in the province and succeeded in 1920 in securing contracts with the Government for exploiting four canal falls on the Upper Jhelum and Upper Chenab canals.

The proposal was to supply power from Joyanwala fall on Upper Chenab Canal at extra high tension and deliver in the Company's sub-station. There it had to be stepped down to high tension and sent to the Company's sub-stations for further stepping down to low tension for distribution. The rate fixed was a graded one, starting from 12 ½ pies unit and going down to 9 ½ pies per unit, according to the extent of the demand. After some time, the Association asked the Company to sub-scribe towards their capital to the extent of Rs.10 lakhs. The company agreed to subscribe to the extent of Rs.8 lakhs. Soon afterwards, however, the members of the Association fell out among themselves and law suits ensued. Thus this proposal also came to an end. The Mayo Road scheme too had already been talked out.

ADMINISTRATIVE CAHANGES

During this period, Lala Harkishen Lal on being released, resumed the chairmanship of the Company. Shortly after, however, at the time of the inauguration of the Government of India Act, 1919, (Montague Chelmsford Reform Scheme), Lala Harkishen Lal was appointed Minister for Agriculture and Industry of the Punjab Government. Rai Bahadur Lal Mohan Lal was again elected as Chairman of the Company. But, he was not spared for long to guide the destinies of the Company. Soon after 26th January, 1921 be was snatched away by the cruel hand of death, In him the Company lost a friend and a guide who from its very inception had been devoting his heart and soul to further the cause of the Company. Lala Mulk Raj Bhalla then came in as a director and was appointed the chairman. Lala Mool Chand , a founder Director, also resigned in the same year on account of ill health and was succeeded by his son, Lala Kharaiti Ram, Khan Bahadur Mian Seraj-ud-din also died. His and Rai Bahadur Lala Mohan Lal's Places were filled by Mr. K. I. Gauba and late Lala Lal chand.

Mr. Drummond, the General Manager, proceeded on long leave and did not return to the company. He was succeeded by Mr. R. W. Thick, who was appointed Chief engineer, the post of General Manager having been abolished. Lala Jag Raj was appointed Secretary of the Company and took charge of the Commercial Department. By now, the Company was expanding its field of activities in many other towns situated in the various parts of India, which expansion we have discussed in detail in Chapter IX. This necessitated the augmentation of Technical and Commercial staff to a great extent. The Commercial office had to be moved to the Baharat Buildings

Following these changes in the management a proposal was mooted by a leading British manufacturer for the erection of a new central Power station generating Alternating Current energy the alternators to be driven by semi-diesel two stroke engines and the energy to be transmitted to a number of substations from which, after conversion, Direct current supply to be given.

The company Chief Engineer was thereupon deputed to visit Bharatpur state to examine engines of this type. He reported to the board in 1922, submitting two parallel schemes with a diesel engine plant of 1,500 kilowatts capacity at a cost f Rs. 18,24,600, and the other a steam driven Alternating current generating plant and sub-station of 200 kilowatts capacity, consisting of three steam engine driven generator sets of 400 KW capacity each, at a total cost of Rs. 10,42,000. By this time peak demand had reached a figure of about 1,000 kilowatts, and it was recorded that a number of requisitions for motive power aggregating to over 1,100 horse-power were received and the company was continuing for other classes of load.

DIESEL ENGINE RAISES DOUBTS

The Board of Directors, after considering the pros and cons of the two schemes, decided that it would be risky to incur such a large expenditure on a new Diesel engine which had then only recently been introduced in the country. Their decision was also largely influenced by the failure of a similar plant with the Amritsar Municipality.

At some of the discussions in connection with this scheme, the then Electric Inspector to Government, Mr. F.L. Milne, expressed doubts in regard to the Diesel engine plant and suggested that a small semi-Diesel two stroke engine driven generating plant be installed in the City for the provision of immediate relief. This suggestion was accepted by the Board of Directors and an order was placed with the same British firm which had made the proposal for this type of engine. An advance payment was also made to the firm for the order. To the great misfortune of the Company, the suppliers failed to execute the order and the Company against lost many months in waiting for the plant A further conference took place in the office of the Electric inspector to the Punjab Government on august 15 1923, to discus. the

technicalities and other relevant matters in connection and other relevant matters in connection with the Company's affairs in which the following were present Mr. E.A. Scot Director of Industries Punjab Mr. F. L milne, Electric Inspector Punjab Lala Kharaiti Ram and Lala Ganpat Rai, Directors of the Company. lala Kharaiti Ram and Lala jag Raj, Secretary and Mr. R.W. Thick chief Engineer of the company.

The Following minutes were recorded "the representatives of the company who were present at the meeting said that they would be prepared to install new alternating Current .Generating Plant (and necessary sub-stations) with suitable reserve plant. For break downs etc, which will be capable of safety and continues generating a minimum of 400 K.W. (subject to the condition that this minimum be increased by 75 percent. and 100 percent for each 100 percent of old and new plant. Respectively by which the net profits, after deducting depreciation at 5 percent. Are less than 12/12 percent of the share capital; and that any further increase in such net. Profiles up to 16/1/2 percent be divided equally between the Company and the consumers. But that after such net profiles up to 16/12 percent. Be divided equally between the company and the consumer. But that after such net profits exceed 16/12 percent. Government will then be authorized to after the rates.

" further that if the above Government guarantee is forthcoming . the Company agree to have the new plant in working order within 18 months from the date Government furnishers the guarantee. "when discussing the above Mr. Mile mentioned that be was not quite certain whether in view of the provisions of clause XI of the Schedule to the Electricity Act a guarantee from Government such as that suggested above would not be ultra vise .However this could probably be got over by introducing an amendment in the existing Licence. Shortly after in October, 1923 Lala Harikishen Lal on resigning roam his ministerial post returned to the Company AS ITS Chairman . During the absence of Lala Harikshan Lal on the resigning from his Ministerial Gaddi, and after the untimely demise of Rai Bahadur Lala Mohan Lal, Lala Mulk Raj Bhalla rendered yeoman services to the Company . For over thirty long and difficult months, Lala Mulk Raj Bhalla decedid every ounce of his energy to the cause of the Company. Days in and days out, he worked with a missionary zeal and successfully placed the company on a sound basis.

DECISIONS OF THE BOARD

On the return of Lala Harikishan lal the question of raising further capital to the forefront. within a month of Lala Harikishan Lal becoming Chairman of the Company, the Board of Directors passed the following resolution. "resolved that the matter of rising the capital be considered in a week's time and the matter of extensions be decided in the light therefore' Subsequent meetings of the Board passed some significant resolutions it was further decided that a similar request be further decided that a similar request be made to the Muncipally for a loan of rs. 3 lakhas or rs.5 lakhas at 6 percent. Payable in three to five years or to be accounted for towards payment of electric bills.

Despairing of any response from these quarters, the board in December, 1923 decided that the ordinary s share capital of the company be increased by Rs. ½ lakhs and that /12 12 first mortgage debentures to the extent of Rs. ½ lakhs carrying an interest of carrying an /12 interest of percent of . Per annum,
secured against the entire assets of the Company. Be issued At the same meeting it was resolved that the Chairman and Chief Engineer to settle the order for the purchase of plant required for the extension scheme.

On February 14, 1924, the board of directors resolved that two additional turbo-alternate sets of 1,00 kilowatt each be purchased against deferred payment. Until the new plant had been purchased against

differed payment until the new plant had been purchased a sever effort was made to explore ways and means to reduced the explore ways and means to reduce the coal consumptions which was mounting up on account of the worn out condition of the plant. Owing to the commended the immediate replacement of one of the existing boil's with one of the existing boilers with one of the john Thompson boilers already in stock . This bad to be fired with pulverized coal for which an equipped was to be purchased at a cost of Rs. 42000, He also recommended that two 400 kilowatts compound or triple expansion steam -engine generating sets be installed and another engine be scrapped replacing arrangement were to serve as a stopgap measure.

NEGOTIATIONS IN ENGLAND.

This was the position when in march, 1924. Lala Harikishan Lal proceeded to England in connection with some of his other business affairs. The Chief Engineer wrote to Lala harikishin Lal in England asking him his opinion about the proposal of installing these 400 kilowatts sets. Lala Harikishen Lal had in the meantime got in touch with several manufacturers in England in connection with the central station scheme equipment. Negotiations with one of them promised to come to an early and successful conclusion. Lala Harkishen Lal, therefore, wrote to the Chief Engineer saying that he was not in favour of installing the interim plant.

Negotiations, however did not result in any business- the terms of payment proving an insuperable obstacle. Lala Harkishen Lal could only offer deferred payment terms to which onone of the British firms were agreeable. In his letter from London to Company, Lala Harkishen Lal regretted the breaking off of the negotiations with the British firm, on whom he had pinned all his faith.

Not having succeeded in purchasing the plant on the desired terms in England, he went by air to Berlin and there got in touch with Messrs. Siemens Schuckert. They refused to make up a tender at such a short notice (only two days had been given to them) . But Lala Harikishen lal was adamant , and Messer's siemens were persuaded to complete the tender within the time specified as it happened to be approximately $5,000 chaper than the lowest tender of the British firm and they were agreeable to accept the order on deferred payment at the rate of Rs. 20,000 per month to which the British firm had not agreed the order was placed for the generating plant with them . A feature of the plant offered by Messrs. Siemens was the high steam pressure recommended for the boilers the original plant of the company consisted of non-condensing steam-engines working at 16501b. per square inch and coupled to 3-wire direct current generators, generating at 460-500 volts similar machine were being added as the demand to about 1,350 kilowatts by the winter of 1923. there was so much pressure on the plant that only one small set could be allowed to stand by at a time. The coal consumption under these conditions was as high as 16.41b . per unit generated.

FIRST PLANT IN INDIA.

MESSRS. Sciences, after making a careful study of the economic question of steam pressure, recommended that the new boiler should be designed for a normal working pressure of 31231b. per square inch and total temperature of steam400C Under these condition the turbines would receive at the stop valve a steam pressure of 2851b. per square inch and 375'C" temperature. The above figures were not high judged according to the European standard, but some of the engineers, in this country were not favorably

Disposed to high boiler pressure with the available unskilled boiler house attendants . This was the first high pressure boiler to be installed in India and was feared that the company would suffer heavily in the long run But the results justified the decision.

The steam consumption under these conditions was stated to be 11.3 1b. per unit with a vacuum of 28 inch mercury at full rated output. As compared with these figure the specified steam consumption of exactly similar turbines offered by British firms working at a steam pressure of 2001b . per square inch and temperature of 305 C. was stated to be 13.31b . pr unit at full rated load on the turbine . the Company thus benefited not only by saving about 50,000 in the initial cost of the plant but cost f fuel apart from the financial s

Assistants obtained in the shape of easy terms of payment. The saving in coal consumption alone amounting with the old plant. The actual saving , however was over Rs. 210000, the difference being due to the drop in the price of coal.

The equipment ordered consisted of the following:-

(1) Three water tube boilers of a heating surface of an evaporative capacity of 23,200 pounds of steam per hour each at a pressure of steam per hour each at a pressure of 22 atmosphere complete with super heaters, economizer, induced draft fans, chimneys, mechanical chain grate stokers, and all necessary accessories.
(2) food pumps and evaporator
(3) Piping
(4) Electricity operated coal; hoist and indicating and recording weigh bridge for coal.
(5) Two steam turbine driven high tension alternators complete with condenser and condenser auxiliaries.
(6) High tension and low tension switch gear and house transfer au
(7) High tension And low tension switch gear and house transformers.
(8) Three complete sub-station equipments for receiving high tension A.C. and converting it to low tension D.C. the boilers were manufacturer by Babcock and Wilcox Damp-kessel-werke of overhauled, the branch of the well-known British firm of Babcock and Wilcox, and the turbines and condensers were manufactured by Escher Wyss of Zurich, Switzerland ,the rest of the plant being of Siemens own manufacturer. The entire order was placed with siemens as main contractors.

ADVANTAGES OF SHAHDARA

The location of the power station was decided upon at shahdara after very careful consideration .the factors which decided the issue in favor of shahdara were as

follows :-

(1) Sufficient land was available on lease at very favorable terms at shahdara

It was also in close proximate to the railway ;station; and thus a siding could be laid cheaply,

(2) A large flour mill under the control of Lala Harikishen Lal was working at shahdara. It would take power to the extent of several hundred horse power.

(3) In addition , there was the prospect of a large additional load at shahdara to extent of about 1,000 kilowatts as shadara was rapidly developing in to an industrial

(4) shahdara being outside the municipal limits no octroi duty was payable on goods

Imported . The saving in this itaems alone amounted to several lakhs of since the shadara power House came jn to operati. The choice of shahdara necessitated an extra capital expenditure of about Rs.1/2 Lakhs on transmission line therefore also energy losses in Transmission Line there were also energy losses in transmission . the advantages enumerated these disadvantages.

A request for the deletion; of various obsolete provision was also made; the rates for energy were proposed was also made ; the; rates for rational basis The area of supply was demarcated in to Direct Current area the former comprising those area which were already well populated and electrified and the latter comprising the outlying areas which were only sparsely or not at all electrified A favorable rate was suggested for alternating .current areas a request ;;was ;also made for inclusion of a large area to the south of the municipal limits; within the area of supply . In fact; the license as; amended was changed almost beyond recognition. following these preliminaries ,preparations for the construction of the plant started in right earnest. The accidental beaching of a ship carrying a portion of the machinery before it reached destinations at Karachi and floods in shahdara held up progress for some time. After the initial difficulties were overcome, construction commended at full pressure.

ONE OF INDIAS FINEST.

Expert engineers were sent out by the manufacture to set up the plant , about half a dozen German experts, assisted by the Company's own technical staff and an army of skilled workmen labored unceasingly for about two years united in the end of 1926.the shahdara power House, one of the finest in India, replete with the most modern automatic control devices. Striation of the sub stations in Lahore. The high tension cable was in duplicate the crossing of the River Ravi was affected by laying the cable on the road bridge of the public works department spanning the river. Three sub -stations were planned one in the city one in the old power house premises on Mcleod road and one in the vicinity of government House. The site for the second was already in the possession of the company, and therefore ,operations

were started there without delay regarding the other two, the company as usual, had to run the gauntlet of municipal intransigence and government apathy. The existing sub station near the water works reservoir in Lange Mandi was too small to house the new and large machinery ordered. There was

a vacant site adjacent to I which was suitable and the company asked the Municipality, ignorant of the nature and functions of an electric substation, agreed to lease the land it the Company would agree to vacate it, when required on three months' notice. The company asked the Government to intervene, but it vain. It looked round for other sited and endeavored to purchase one plot, which was suitable , from private owners , but without effect. Ultimately the company succeeded in obtaining a piece of land just outside the Lahore Fort from the Fort Area committee.

The land for the third substation cost the company no less bother. A couple of suitable sites in the vicinity of the junction of the Mall and Davis Rods were selected and application made to government for the lease of either of these. The government , however agreed to give a piece of land within the precincts of the government intimated to the company was about to start operations on site, government intimated to the company that the site was no longer available. Ultimately , a site between Ferozepur Road and Panj Mahal Road was obtained and the substation built upon it , known as the South Substation.

About this time LaLa Sohan Lal, now Rai Bahadur LaLa Sohan LaL, M.L.A Chairman of the Company joined the Board of Directors. Although young in years. He was shortly destined to play a very important part in the history of the company.

Though the Shahdara Power Station was ready by the end of 1926, the three sub stations could not be ready till several months later owing to the delay in getting the sites. Moreover, the necessary amendment of the licence took an unduly long time . As the Company could no longer wait for the amendment of the licence asked into commission on March 23,1927. Subsequently the amendment of the licence was formally notified on May, 09,1927 , without however , giving the right to supply energy in shahdara area.

A RED LETTER DAY

The inauguration of this was a red letter day in the history of the Company. All restraint on the grant of new connections ceased immediately and extensions to distribution lines on a large scale were taken in hand. In order to cater for the outlying areas, which had been ear marked for alternating current supply the construction of seven new static substation of capacities ranging from 50 to 100 KVA was projected and taken in hand. These were Taxali Gate Sanda Kalan , Poonch House , Sheranwala Gate Acid factory Maclagan College and Rajgarh.

About this time the electricity supply in Amritsar , which was run by the Municipality , become inadequate for meeting the demands of the public . They projected for a steam turbine driven station but failed to secure the sanction of the Government because the latter expected to meet the requirement of Amritsar from the Uhl river Hydro Electric Project (now known as the Mandi Hydro Electric Project which was intimated in 1923 and expected to the completed by 1930. Owing to delay in completing the construction of this Hydro Electric Scheme, Amritsar was placed in a most difficult position . At this juncture the Lahore Electric Supply Company came to the rescue of the Government Hydro Electric Branch and agreed to help then out the difficulty. The Hydro Electric Branch purchased power in bulk from the Company and sold it the Amritsar Municipality.

This arrangement entailed the construction of step up substation at Shahdara for raising the pressure of the Company's supply from 6,600 volts to 33,000 volts , a transmitting energy to Amritsar at 33000 volts and a step down substation at Amritsar for delivering the supply to the Amritsar Municipality at 11,000

volts. This was the first super tension line erected in Northern India by the Hydro Electric Branch, A good deal of trouble was experienced on this line from birds which culminated in a serious break down of one of the two generating sets a Shahdara Power House in June , 1930 and a extensive damage to the Company's underground cable systems and equipment in the Comopany's substation.

This break down put the Company in a very precarious position. There was no standby plant except the remnants of the old steam plant on Mcleod Road and that was then in a neglected condition. All efforts were diverted for bringing the Mcleod Road plant in perfect working condition which, by no means, was adequate to take the entire load of the Shahdara Power House in case of failure of the only available set running there. A special electrician, who arrived by air repaired the windings with the assistance of the Company's Staff. The trouble was, in the end, minimized to a great extent by replacing all iron cross arms of the 33,000 volt transmission line with wooden ones. The supply of Amritsar from Lahore ceased on April 1, 1933, after full three years when the Hydro Electric system was ready. After the Shahdara Power House came into existence and the company's 6600 volts underground cable system with unearthed neutral was put into commission the company experiences serious trouble as soon as arcing ground fault appeared on the high voltage system. This became very acute during the days of Amritsar supply when severe surges appeared on the entire system and resulted in destruction of Company's apparatus and instruments. This was not solved till 1931 when Mr. Paul the present Chief Engineer of the Company recommended the installation of Quenching Transformer or Arc Suppressors on the 6600 Volts busbars of the Power House at Shahdara. Ever since they were installed the trouble has been overcome.

The results more than justified the Company's hopes Demand for energy increased by leaps and bounds. Within a year of commencement of the scheme, it had become apparent of the scheme, it had become apparent that the plant installed would very soon become insufficient and enquires were therefore promptly issued for one additional boilers of the same capacity as the existing ones. Order was placed in 1929 for this equipment, together with an electrically driven turbine feed pump and a plant for chemically treating the water drawn from the wells in the Power House compound in order to avoid the trouble that was being experienced with the formation of scale in the boiler tubes due o the existence or hardness in the raw water drawn from the tube wells

CHAPTER VI

THE IDEA GROWS

The re-organization of supply and distribution having been satisfactorily carried out, the company entered the next stage of its life with confidence. During these years it spread its services far and wide and the system at its headquarters was further enlarged to cope with the increasing demand for energy both for industrial and other purpose.

In 1930 the company received the additional plant ordered in 1929 for the extension of the Shahdara Power House and the erection was completed in 1931. By this time the capacity of the Shahdara Power House had increased to five boilers, having a total steaming capacity of 416000 lb. per hours, three turbo generator sets having a total capacity of 9450 kilowatts. In addition a new electrically driven turbine feed pump delivering 45000 gallon of water per hour and a new water softening plant for the boiler feed water, were also installed.

The company was concentrating on making effective arrangements to cope with the increasing demand of r energy. It carried on intensive propaganda for popularizing the use of electricity in all spheres of life. This resulted in an increased demand for electricity for industrial purposes. Domestic appliances, including heating & cooking, and electro medical apparatus.

A NEW SCHEME.

The company had foreseen the development and decided to launch a scheme of augmenting its entire distribution system. The scheme involved the extension of the three existing converter substations and the construction for as many as seven new converter substations and twelve A.C substations.

The scheme also involved the extension of the Company's 6600-vold underground cable transmission system, augmentation of the distribution lines and the laying down of additional distribution mains from the new substations. The estimated cost of the entire scheme expected to be completed by March 1932, was about Rs. 700,000. The entire scheme was put through, except in minor details.

Immediately following the above scheme, two A.C static substations of large capacity were installed at different places. Sheranwala Gate Substation was also enlarged. At the request of the university authorities, a substation was built in the university premises to give alternating current supply for the science laboratories. A direct current substation was constructed in the Baharat Buildings compound, which was later shifted to a site in the Mayo Hospital and is now known as Mayo Hospital substation where larger plant consisting of two 1000-kilowatt rotary converters with transformers and induction regulators of adequate capacities and other equipment for supplying the new X-Ray installation of the

mayo hospital, were installed. A substation was constructed at Sannt Nagar. Application was made for inclusion of the suburb of Nawankot within the company's area of supply and, as soon as that was granted, and Alternating Current Sub-station was constructed there. To meet the growing demand three alternating current static substations were erected, in all, the company now has in Lahore tow D.C substations, 24 A.C substation and seven combined A.C and D.C substations.

Difficulties in Relays.

With the construction of this large net work of substations, the satisfactory grading of protective relays on the company's 6600 volt system soon began to present difficulties, these relays were hitherto operated on the excess current and time principle, but since the selective action of these relays was not fine enough for the increased number of substation on the system. The company's engineers, after careful examination of the problem, installed impedance relays working on the distance principle over the entire system, discarding the former relay system. The impedance distance rely system has resulted in considerably improved selective action, reducing the interruption of supply to the barest minimum.

The Mandi Scheme.

A factor which hindered the expansion scheme of the company was the Mandi hydro electric scheme. The Government had hope that this scheme would be ready by 1930. it was on account of this scheme that the Government were reluctant to allow outside bodies to undertake electrification of towns situated within the orbit of the scheme namely the whole of Central and Eastern Punjab. Moreover, the Government was anxious to secure a sufficient demand for their power.

The Mandi Hydro-Electric scheme was first mooted in 1923 and its estimated expenditure, revealed to the Provincial Legislative Council, was Rs. 175 lakhs. As the scheme progressed, the actual expenditure went for beyond the original estimate. This scheme was subjected to sever public criticism, both inside the Legislative Council and outside in the Press and on the platform. It was loudly alleged that the large resource of the province were being unnecessarily sunk in the undertaking. In the welter of criticism, the scheme was complete in 1934, at a cost of over Rs. 750 lakhs.

For utilizing energy from the scheme, the Government originally thought of selling the same in bulk to sound private parties, who in their turn may organize the electrification of different towns within the ambit of the scheme. In pursuance thereof the Government secured the load of bulk supply to Amritsar. They also opened negotiations with the Lahore Electric Supply Company from Hydro-Electric scheme. Although the Government offered lowest rated thy could possibly afford, the Company found that with its won first class generating plant, its economical management and highly efficient organization, it could itself produce electricity at cheaper rate. Consequently the proposal could not be accepted.

Ultimately the government decided to undertake the work of distribution in towns in their own hands. For this purpose the Government decided to take out a license under the Indian Electricity Act in their won name. when the license was advertise prior to being granted (in accordance with the legal procedure) it was found that among others the Government wanted t license in respect of a territory which has already included in the area of supply of Lahore. Thereupon the Company promptly lodged objections. It was trusted that the Government would not attempt to poach into the preserves of the Company in actual practice. The government, however, paid no heed to the objection of the company. Soon after this objection developed into a first-rate question which formed the basis of protracted

litigation between the company and the secretary of state of India. The facts were that shortly after the Mandi Scheme was completed, the Government opened negotiations with the North Western Railway offering to supply them power for their workshop at Moghalpura, near Lahore. This place was situated within the Company's area of supply, and until then was supplied with energy by the north western railway's own power house situated there. The railway had, for sometimes past, been contemplating to close down this power house, and had actually opened negotiations with this Company for taking supply for the requirements of their workshops. These negotiations had reached an advanced stage and rates and terms had been settled to the satisfaction for both parties, when the Punjab Government appeared on the scene with their offer of a supply from their Hydro-Electric Scheme. Although the rated offered by the Hydro Electric Authorities were higher than those which the company had offered, the Railway strangely turned down the company's offer and closed the business with the government.

The company made several representations but without any avail. Findings no means of redress, the company had recourse to the law courts and filed a declaratory suit against the Government. The company's position was that the License taken out by the government for that area was invalid since the government, as guarantor of the license, could not grant a license to themselves. The company secured the best available legal advice procurable, engaging the right Hon'ble Sir Tej Bahadur Sapru as senior counsel. Although the company ultimately lost the main case, still the court upheld the company's contention that the license obtained by the government was invalid. However the court held that the government had the right of supplying energy without taking any license.

In 1932, the company was informed of the intention of the government to revise the rates, the matter was Referred to the Electricity Advisory Board. The Board recommended an all round substantial reduction in the rates and while making the above recommendation, it anticipated a decrease in the Company's income the extent of Rs. 6,00,560. The company submitted several memorials, but the revised rate as recommended by the Board were subsequently gazetted. It may be mentioned that since 1927 when the first attempts to revise the rate was made, the company had been giving concessions to consumers in various ways. The meter rent as reduced from Rs. 1 to 0-5-0 per month. Since connections were granted on nominal charges instead of those under the provisions of Schedule VI of the Indian Electricity Act.

CHAPTER VII

LAHORE MUNICIPALITY AND THE COMPANY

In 1934, the Company had serious dispute with the Lahore Municipal Committee over the supply of energy for street lighting and municipal tube wells.

The Lahore Municipal Committee wished to terminate the agreement with the Company under which electricity was supplied to it on the expiry of the minimum period of five years. In accordance with the agreement twelve months notice was given by the Municipal and Company was naturally under the impression that the Committee was making necessary arrangements to meet their requirements . It came to the notice of the Company that they were negotiating with the Punjab Hydro Electric Branch for supply of energy.

The Hydro offered that current at a far off place near Ichra which network of the entire distribution system in whole of the town. However this was the concern of the Municipal Committee. The Company

on its part had to switch off the current in compliance with the Committee request. Before the fateful day arrived (13th May 1934) the Company in the public interest wired the following information to the Deputy Commissioner.

"As the Lahore Municipal Committee have terminated the agreement dated thirteenth May 1929 for supply of power for street and pumping stations the Lahore Electric Supply Company, Limited will cut off the supply of electric energy to street lights and pumping stations at midnight between twelth and thirteenth May 1934"

The then Deputy Commissioner of Lahore , the late Mr. S. Partap I.C.S., called upon the General Secretary of the company and requested him not to disconnect the supply to the Municipality. Before the time for disconnection-midnight of May 12,1934 the district Magistrate served on the Company an order under Section 144 of the Criminal Procedure Code, directing the Official of the Company to abstain from cutting off the supply. In this connection , the observations of the ten commissioner of Lahore division, Mr. B.H Dobson, O.B.E, I.C.S are as follows:

" In the first place I desire to place on record that the Municipal Committee of Lahore has lamentably failed in its primary duties of ensuring to the public of Lahore the proper lighting of the public streets and an adequate supply of pure drinking water. If the District Magistrate had not intervened on the afternoon of Saturday, May 12th, by issuing his order under Section 144 of the criminal procedure code, Lahore would at present be without any street lighting and without any power to work the tube wells which form an essential part of the Lahore water supply.

The Lahore Municipal Committee,

Being responsible for the present situation, must do everything in its power to put matters on a satisfactory basis. The present position by which the health and safety of Lahore depends on an emergency order issued by the district. Magistrate is intolerable and must be ended by the Committee with as little delay as possible.

ILL-INFOMRED CRITICISM.

The Committee appointed by the Government to inquire into the Lahore Municipal affairs, recorded the following remarks in its reports:-

"There is a good deal of ill-informed criticism of the Company's arrangements. For example, the Committee complains that the Company charge them for all poles on which street lights are fixed, without receiving any reciprocal credit for private connections attached to these poles. The Company contends, on the other hand, that the number of poles intended for private consumers to which street lamps are fixed is greatly I excess of the number of poles charged to the Committee for street lighting.
The exact figures are now available, from which it appears that out of 7,375 poles the cost of 1482 only is charged to the Municipal Committee. The inferences are clearly in favour of the Company. The Committee complain also that the maintenance charge of Rs.9 per annum is extortionate. The Electrical Engineer to Government has explained however, that the charge is in accordance with the usual practice and considerable less than the Committee

he Committee have not much of complaint against the capital loan arrangements, because they are at liberty to repay the loan if and when they wish, and as they appear to have made reservations for the purpose, they should lose no time in doing so.

The relations between the Supply Company and the Municipal Committee are unfortunately strained. But after perusing a mass of not very edifying correspondence on the subject, I have formed the conclusion that the Committee are mostly to blame. For example, a licensed plumber of the Municipality not long ago, without notifying the Company under section 15 of the Indian Electricity Act, dug a trench for a new water connection and in doing so punctured a high tension cable. The Committee in their reply admitted that they Act. Other instances were brought to my notice in which trenches were excavated without proper notice in the vicinity of high tension cables. The Committee seem equally unaware of Section 13 of the Indian Electricity Act, since they have more than once threatened the Company with legal proceedings for laying underground cables without proper sanction, even after receipt of one month's statutory notice from the Company, which they ignored. Complaint is also brought against the Company that road surfaces are not properly repaired after they have been opened. The Company have now realized that it is advisable to get these repairs executed by the Municipal Committee at the Company's cost, in spite of which there are instances to show that after several months delay the Committee still pass on the blame to the Supply Company. The fact is that whereas the Company are punctilious in observing the letter of the law, the Committee's employees have not the technical knowledge to meet the Company's contentions and resort to vexatious methods inconsistent with the manner in which once corporate body should behave towards another. It is to be hoped that as a result of the recent conference, common sense and mutual understanding will bring about better relations in future."

After the service of notice under Section 144 Criminal Procedure Code on the Company, the supply of energy to the Municipality for street lighting and tube-wells was continued. The Company sent bills for the same every day to the Deputy Commissioner, who made the necessary, payment. This state of affairs continued till July 11, 1934, when the Deputy Commissioner asked the Company to send bills direct to the Committee. Ultimately the Municipal Committee asked the Company to send monthly bills.

During this time negotiations were carried out between the Committee and the Company but to no fruitful purpose finally a conference was called at Simla where representatives of the Punjab Government, the Municipal Committee and the Company participated. On the findings of the conference the Committee paid to the Company a considerable sum which was standing as arrears and which the Committee was persistently refusing to pay.

Regarding other matters connected with the street lighting agreement the negotiations went on fairly over a long period. Later when Mr. I.E.Jones, I.C.S, was appointed the Administrator of the Lahore Municipal Committee, he decided most of these points in consultation with Rai Bahadur Lala Sohan Lal, the Chairman of the Company. However, the agreement for the street lighting could not be executed and the matter was again delayed. Although the agreement has not so far been executed yet it is hoped that since the points of difference have been satisfactorily settled, it will be executed in a very short time.

CHAPTER VIII.

EXTENSION OF SHAHDARA.

By 1936 the load had again grown to such an extent that the generating plant at Shahdara became barely sufficient to cope with the demand. A scheme was drawn up for one new turbo-generator of 8,000 kilowatts and two new boilers each of 44,000 lb. of steam per hour evaporative capacity. The successful tenderers for the plant were again Messrs. Siemens for the generating plant and switchgear and Messrs. Steinmueller for the boiler plant, their tenders being the most complete from the engineering point of view and the lowest in price. The plant included the latest expansion switches and modern type equipment to replace all old circuit breakers and other switchgear. This became necessary in order to cope with the increased rupturing current due to the increased capacity of the generating plant. The outstanding feature of this extension was the saving of coal fuel effected to the extent of over Rs. 75,000 per annum.

Immediately following this extension, it became necessary for the Company to increase the transmission capacity of the underground cables from shahdara to Lahore. Already four cables were laid, the total capacity of which was approximately one-half of the expected maximum demand, but they provide no stand-by capacity. As a result of this overloading of the cables, it was decided to increase the transmission voltage to 33,000 and lay two 33,0000-volt underground cables, each capable of delivering about 7,000 KVA at Lahore. In course of this investigation it became a problem for the Company to lay the 33,000 volt cable on the Ravi bridge, the P.W.D authorities having refused to grant the permission on account of the weight and size of these cables.

SPANNING THE RAVI.

It was then decided to span the Ravi river by using submarine type cable. The entire 33,000-volt underground cable system was laid by a European expert. This necessitated the use of step-up transformers at Shahdara Power House for stepping down from 33,000 to 6,600 and step-down transformers for stepping down from 33,000 to 6,600 volts at the receiving end at the Fort substation and the employment of reactors of adequate capacity in series with the existing 6,600 volts underground feeders in order to enable the latter to work satisfactorily in parallel with the 33,000 volt system. Four 7,000 KVA transformers were ordered for the 33,000 volt system including the controlling switchgear and reactors for the 6,600-volt system from Messrs. Brown Boveri & Company of Switzerland. Owing to the outbreak of war, only partial delivery of this equipment has been effected and the Company has not been able to put this scheme into operation.

CHANGES IN DIRECTORATE.

In the year 1935, Lala Harkishen Lal, the Chairman of the Company was involved in personal difficulties, unltimately resulting in his imprisonment. During that time the Board of Directors, saw many quick changes Lala Duni Chand and Lala Jiwan Lal Gauba resigned. Lala Jaggan Nath Sayal Lala sham Lal Advocate, Khawaja Nazir Ahmed and Sardar Amar Singh came on the Board for some time and later resigned. Mr. Manohar Lal Finance Minister to the Punjab Government joined the Board which place he left when he became the Finance Minster of the Punjab Government. Lala Jag Rj Mr. Rajendra Kumar jain , Lala Daulat Ram Sabherwal, Lala Mulk Raj Aggarwal and Dewan Hari Krishna Das joined about the same time. Lala Jag Raj and Lala Daulat Ram Sabherwal left. Sahu Shriyans Prasad was, a little later

appointed as director. Lala Jag Raj was not elected by the Shareholders. Lala Ganpat Rai one of the founder-directors of the Company died in the year 1939, whose place was filled up by Lala Sardari Lal.

In March, 1936, when Lala Harkishen Lal was declared insolvent Rai Bahadur Lala sohan Lal M.L.A. then Rai Sahib Lala Sohan Lal was elected Chairman of the Company which office he still holds. In Rai ahadru Lala Sohan Lal, M.L.A. the Punjab has produced a young man of sterling qualities of head and heart capable of bearing the arduous burdens with endless courage and resolute conviction. During the chairmanship of Rai Bahadur Lala Sohan Lal.M.L.A. the Company has made substantial progress and has been maintaining the same standard of efficiency which has made the Company what it is today.

ORGANIZATION EXPANDED

During these years of progressive development of the Company , it became necessary to expand its organization. In 1933 the Company's organization was divided into technical and commercial departments under Mr. B>Paul as Chief Engineer and Lala Jag Raj as General Secretary respectively. While Mr. Paul remained the head on the technical side a separate Executive Engineer was appointed for Lahore Division and another for outstations. In 1938 Mr. Faehnrich the Executive Engineer Lahore Division left the service of the Company. He was succeeded by Mr. D. D.Sharma. In the following year Mr. Von Rhein Executive Engineer Outstations also left the Company. He was succeeded by Mr. Ram Das Kalra who rose from the ranks by dint of sheer ability and merit. On the outbreak of war in 1939 Mr. F. Reinisch the Power-station Superintendent at Shahdara was interned by the Government. The Company then appointed Mr. D. D. Sharma as Power-Station Superintendent and Mr. S. A. Prabhu succeeded him as Executive Engineer Lahore Division .

In September 1935 the General Secretary of the Company Lala Jag Raj resigned. Lala Ganga Ram succeeded him as General Secretary and Mr. J. d Khosal continued to work as Secretary Lahore undertaking . In early 1939 Mr. Pran Nath Mehta an advocate of High Court of Judicature at Lahore was appointed as the General Assistant.

EFFICIENT SERVICE.

Besides the far-reaching technical improvements made from y ear to year to ensure steady and continued supply to the town of Lahore the Company throughout maintained various efficiency departments for rendering service to the public. A 24 hours complaint department was already open for attending to complaints of consumers. This office was further strengthened by opening three more complaint offices in different parts of the complaints in their respective areas. The Company also added motor-vehicles for attending to the complaints received from far distant parts of the company's area of supply. Thus they were able to meet all kind of emergency complaints breakdowns of mains during rains and storms and failure of underground cables in shortest possible time.

The Company's staff is always ready to assist consumers to take temporary lighting on ceremonial occasions rendering them assistance even by posting men to look after their own installations which often prove troublesome owing to the temporary nature of the work . This is a service which is not generally given elsewhere.

All sub-connections and re-connections of consumer's premises are also carried out at the shortest possible time. The Company is in a position to handle such cases at very short notice.

ADVANTAGES TO CONSUMERS.

Other advantages conceded by the Company to the consumers are: Easy payments for service-line charges reduction in meter rent to 0-5-0 per month for domestic purposes reduction from schedule rates in kilowatt demand charge from motive power consumers and granting service connections on nominal charges instead of charging the actual cost allowed under the provisions of the Indian Electricity Act,1910. These substantial reductions made by the Company have enabled the middle and poor class population of Lahore to enjoy the benefits of electricity which would otherwise have been prohibitive to them.

The Company has also organized a regular scheme to impart practical training to three different categories of apprentice—apprentice engineers subordinate apprentices and trade apprentices. The apprentice engineers are recruited from graduates of engineering colleges and they receive stipends starting at Rs. 45 per month and rising to Rs.100 per month during a course of three training. The subordinate apprentices are recruited from technical schools or others who have a lower standard of engineering education. They are given departmental training. The trade apprentices are recruited from the tradesmen's class and receive stipends from Rs.15 to Rs.20 per month during their apprenticeship period. The training given by the Company is much appreciated. Most of their apprentices on completion of their training have found appointments in public services as well as in the Company's service.

UP-TO-DATE HOSPITAL

The Company maintains an up-to-date hospital at Shahdara for the benefit of its employees and the general public. The hospital is well equipped with modern surgical and medical appliances for rendering immediate aid to all cases of accidents and illness under the direction of an able whole-time M.B.B.S doctor. Medicines and treatment are given free. The hospital treats about 20,000 patients yearly from among the general public besides the Company employees. For the benefit of the employees a branch of the hospital has been opened in Lahore also.

TESTING DEPARTMENT.

As a necessary adjunct its organization the Company maintains an up-to date testing department where articles of various kind are tested before being used. Other articles actually in use are also periodically tested. The department is sub-divided as follows:-

1. Meter Testing Laboratory.

For testing and repairing house service metes both Direct Current and Alternating Current medium pressure metes for power consumers and other large consumers' maximum demand indicators automatic time switches relays ammeters voltmeter kilowatt hour meters kilowatt meters power factor meters and all other types of electrical instruments.

The laboratory is fitted with fine precision instruments ensuring tests being carried out within very close limits of accuracy. Special apparatus is installed to keep the voltage and current absolutely constant during tests.

2. Lamp Testing Outfit

For testing luminosity and efficiency of electric lamps.

3. Oil Testing Dept.

For testing the insulation properties of the oils used in high tension circuit breakers transformers starters and other apparatus. Any oil found defective is subjected to rigid purification treatment and is thus made fit for use.

4. Coal Testing Dept.

Coal as it comes from the suppliers is tested to see that it complies with the guaranteed specifications in respect of calorific value ash content caking properly moisture contents proportion of volatiles and fixed carbon grading of size and dust and shale content. Every consignment of coal is tested before it is allowed to be sent to the boilers.

5. Boiler water testing.

A rigid control is kept over the water supply to the Boiler House to ensure that the water sent to the boilers is of the required high degree of purity for avoiding seale formation or corrosion in the high pressure boilers or the delicate turbine blading. Exhaustive chemical tests are carried out at various stages of work.

CHAPTER IX.

NEW VENTURES.

Following the success achieved in its venture in Lahore and with the experience gained in electric supply business the /company felt itself competent to extend its activities in other parts of India. In this endeavour the Company was greatly helped by the surplus resources it had accumulated in the past. The Company made an attempt as early as 1919 for licences for some of the large towns in the Province. At that time General Electric Company (India) Limited entered the field of competition and obtained licences for the larger towns. In view thereof this Company did not feel worthwhile to pursue the matter further.

Later however the Company again turned its attention to -------- fresh field to conquer. It was successful in securing licences for supply of electricity to the following 14 towns:-

Shahdara (Near Lahore)

Sialkot	
Rohlak	
Hissar	
Hansi	
Bhiwani	
Rewart	
Sirsa	Punjab
Peshawar	N.W.F.P
Larkana	Sindh
Katni	Central Provinces
Bilapur	and Berar.
Sirajganj	Bengal.
Farrukhabad	United Provinces

Independent companies for running the various undertakings were formed under the managing agency of the Lahore Electric Supply Company . Rai Bahadur Lala Sohan Lal M.L.A. the Chairman of the Lahore Electric Supply Company is the Chairman of all the subsidiaries. To insure the local interest local directors have been taken from almost all these stations and all the companies are running progressively.

SIALKOT ELELCTRIC SUPPLY CO. LTD

MANAGING AGENTS:

THE LAHORE ELELCTRIC SUPPLY

CO. LTD.

The licence for the supply of electricity to the town of Sialkot was granted to the Lahore Electric Supply Company Limited in 1928 for a period of 10 years which period expired in March 1938. The Company however soon found itself in a difficult position to meet the requirements of the Sialkot town which became one of the principal industrial town in the Punjab soon after electricity was introduced there. The company therefore adopted a bold policy of expansion and extended the power house bringing its capacity to about 1400 KW and did not shirk in supplying electricity freely to all industrial consumers requiring power for the development of their industries.

By March, 1938 when the term of the licence expired the Government intimated its desire to exercise its desire to exercise its option to purchase the undertaking. However at the time when actually the undertaking was be taken over in view of the particular circumstances regarding the Hydro-Electric expansion in that area and other such matters. Government extended the period of licence by another 5 years. The Company has maintained the efficiency traditions of the Lahore Electric Supply Company and is rendering effective service to the consumers in the town.

ROHTAK AND HISSAR DISTRICTS

ELECTRIC SUPPLY CO. LTD.

Rohtak , Hissar Hansi, and Bhiwani .-

In 1932 the Lahore Electric Supply Company Limited obtained licences in Southern Punjab for four towns—Rohtak Hissar, Hansi, and Bhiwani - which scheme was completed in 1934. These towns have independent diesel engine power houses of different capacities. A separate Company namely the Rohtak and Hissar Districts Electric Supply Company Limited was formed in the share capital of which the Lahore Electric Supply Company Limited purchased more than 51 percent capital. In all these towns every effort is being consistently made to serve the public effectively. The licence for these towns is for a period of 30 years and the Company is making good progress. The Lahore Electric Supply company Limited are the Managing Agents of this Company.

RAWARI AND SIRSA

The licences for these towns were granted in the year 1935. Theses town are being managed and controlled by the Lahore Electric Supply Company Limited and are making good progress.

PESHAWAR ELECTRIC SUPPLY Co. LTD.

In 1929 the licence was obtained for a period of 50 years and a company was formed under the name of the Peshawar Electric Supply Company Limited with a paid up capital of Rs. 5,00,000 the Lahore Electric Supply Company Limited being its Managing Agents the latter having more than 510 per cent in the share capital of the company. Soon after the Company was floated the electrification scheme of Peshawar was completed and supply was commenced in 1931 with a steam generating plant having a total installed capacity of 800 Kilowatt. By the year 1935 the load reached the working capacity of the station and it became necessary to extend it s power station. The capacity of the station was increased by replacing the two 400-kilowatt steam turbo generator sets and a third boiler of steaming capacity of about 12000 lb. per hour was added in 1939.

The Company experienced difficulty in erecting its power station of a site leased by the Municipality on account of its sub-soil water level being within two to two and a half feet from the natural ground level e=which was overcome by erecting the entire building and heavy machinery and boiler foundation on concrete supports on steel concrete files. The Company is running successfully since its inception.

LARKANA ELECTRIC SUPPLY Co. LTD

The Larkana electric licence was obtained in the Year 1929 in the name of Lala Harkishen Lal and Late Dewan Bahadur Murlidhar which was subsequently assigned to the Larkana Electric Supply Company Limited under the Managing Agency of the Lahore Electric Supply Company Limited. The Company was formed with a paid up capital of Rs. 2,50,000 and is running successfully. The Lahore Electric Supply Company Limited has more than 51 per cent in the share capital of the Company. It has a steaming power station consisting of two Lancashire boilers and three steam engine sets.

CENTRAL INDIA ELECTRIC SUPPLY CO. LTD.

The licence for these two stations was obtained in 1934. The Company namely the Central India Electric Supply Company Limited was formed with a paid up capital of Rs.6,88,900, the Lahore Electric Supply Company Limited has more than 51 per cent share capital of the Company . Katni being the principal centre for lime stone having about 14 lime stone quarries and a cement factory the Company decided to install a steam power station with two turbo generator sets o f 500 Kilowatt each and two Babcock and Wilcox water tube boilers each having a steaming capacity of 8000 lb. per hour. The Bilaspur station which is about 120 miles from Katni has separate power house having three steam engine generating sets one 400 Kilowatt steam turbo alternator set and three marine type Babcock and Wilcox boilers the aggregate capacity of the power house being 780 Kilowatt. The generating voltage of both these stations is 3300 which is stepped down to 400/230 volts for domestic and industrial supply. These two stations are also operating very successfully since the year 1935.

FARRUKHABAD ELECTRIRC SUPPLY

CO. LTD.

The management of the Farrukhabad Electric Supply Company Limited was resumed by the Lahore Electric Supply Company Limited in December 1939. Owing to various reasons the Government of the United Provinces revoked the Farrukhabad Electric Supply Company Limited Licence which necessitated the change of hand in the management. The original managing agents and most of the then directors then resigned and the Lahore Electric Supply Company Limited purchased a substantial interest in the share capital. On this the Government of the United Provinces revived the Farrukhabad Electric Licence. At this time the affairs of the Farrukhabad electric Supply Company Limited were at a low ebb.

However as soon as the Lahore Electric Supply company Ltd., took charge, the Company began to progress very rapidly. The condition of the plant was most precarious on it taking over and there was no standby plant to enable the running sets being thoroughly overhauled and repaired. Under the skilful management of the Lahore Electric Supply Company's engineers all difficulties were surmounted additional plants were put up and the service to the consumers very much improved. This station has now a total installed capacity of about 486 Kilowatt. The heavy losses formerly incurred in fuel and lubricating oil consumption turned into a profit from the very first month of its working by the Lahore Electric Supply Company Limited. The Company promises to be one of the most profitable concerns under the management of the Lahore Electric supply Company Limited.

SIRAJGANJ

In March 1935 the Company purchased the Sirajganj Electric Undertaking in Bengal at an auction sale. The Company has been running the undertaking successfully under temporary permits up to this date. The Company applied for 50 years licence. At first the Bengal Government agreed to the proposal but later wither their offer reducing the period of licence from 50 to 10 years. To this the Company did not agreed and has eventually disposed off this undertaking at a reasonable profit.

SHAHDARA.

The Shahdara Electric Licence was granted in 1930 though it was applied for as early as 1926. At the time when the licence was obtained Shahdara village offered no prospects of any profitable business. However by the forward policy of the Company it was able to attract all the important industrial concerns there to run their factories with electricity. The licence was for a period of 10 years at the end of which the Hydro-Electric Branch of the Punjab Government look it over from the Company when the town had fully developed and its maximum demand had risen to about 450 Kilowatts.

As regards the further expansion scheme the Company has interested itself in many important industrial schemes some of which are being seriously discussed.

Speech of rai Bahadur Lala Sohan Lal M.L.A Chairman of the Lahore Electric Supply Co. Ltd. Delivered at the Luncheon given in honor of His Excellency Sir Henry D. Craik Bart., G.C.I.E K.C.S.I., C.S.I., I.C.S., Governor of the Punjab off the occasion of hi s visit to the Shahdara Power House off Saturday the 25th January, 1941.

YOUR EXELLENCY AND GENTLEMEN.

It is my pleasure and privilege this afternoon to welcome your Excellency and other guests on behalf of myself my colleagues in the Directorate and the staff of the Company to this Power House. We are indebted to you Sir for sparing your valuable time in the midst of your multifarious engagements to pay us this visit. I am deeply conscious of the interest you have always taken in the industrial progress of this Province and I realize that it is this interest which has prevailed with your Excellency in agreeing to visit this Power House.

Your Excellency the romance of electricity in the Punjab---of little glass bulb which replaced the primitive oil lamp---is reflected in the history of the Lahore electric supply Company. I n the annals of the modern Punjab this Company dominantly figures out to be one of the first few great movements which have made Punjab what it is to-day. The present economic and industrial progress of this Province is a lucid commentary on the services rendered by the electricity industry which developed in the wake of the establishment of this Company. A Pioneer institution as it was it had its own problems steadily solving them the Company rapidly developed from strength to strength spreading “light” and imparting “energy “ all round.

The movement was initiated in the year 1912 by the late Lala Harkishen Lal when other industrial concerns and public bodies refused to risk the venture. From a comparatively smell enterprise the Company has grown out of all recognition with its ramification spread far and wide. The stupendous growth of the Company is evidenced by the fact that in 1912 starting with an investment of rupees five lakhs its assets are now conservatively valued over Rs. 2,50,00,000. Having only 98 consumers in 1913 it is to-day serving about 40,000 consumers in the town of Lahore and about 20,000 consumers in other towns served by the Company situated in different parts of India. The largest single power producing unit outside the Government Electric Supply Branch system with a capacity of over 8,000 K. Ws.,
belongs to the Lahore Electric Supply company in its Shadara Power Station.

Having an annual revenue of only about Rs.30,000 in 1913 to-day the figures of the Company have reached well nigh rupees thirty lakhs. Having only about fifty members on the staff it has to-day over two thousand people working in different capacities. In the year 1913 the Company paid only a sum less than a couple of thousands as income-tax to the Government. For the last many years the amount of income-tax being paid to the Government ranges between rupees three lakhs to rupees three lakhs and fifty thousand. Tested by all comparison with private enterprise or even the Government projects it conclusively proves that such glorious results have been secured by dint of hard labor courage of conviction and honesty of purpose consistently and persistently brought to bear upon the day-to-day working of the Company. The Company has in its organization set a rare standard of efficiency while discipline hard work and devotion have been the watch-words of the high and low in the Company.

Another great factor which has contributed to the success of the Company is its economical management. I could give you many interesting details on this point but would refrain from tiring you at this time by giving comparative facts and figures. By careful direction the Company has been able to enlarge and extend it sphere of activity with the result that to-day as many as 12 towns besides Lahore situated in various other Provinces of the country including Central Provinces United Provinces Sindh and the North-West Frontier Province owe their electric lighting and electric power to our half a dozen subsidiary companies.

In living memory the Lahore Electric Supply Company has completely transformed the standard of living in the widest sense of the term. The naked oil lamp which for centuries had been the chief illuminant has gone unsung and unwept. The use of the electric motor has extended greatly and its successful and economic working has given a feverish impetus to the development and growth of the industry in this land of five rivers.

The Company is proud of the services it has rendered in the past. But its task has not yet been accomplished. With so rich and extensive experience behind under the benevolent patronage of the Government it looks forward to times not far off when it may be able to give a modern tramway system equipped with modern comforts and amenities providing almost a “Penny Passage” round the entire town and its suburbs. At no distant future it may be possible for the Company to give the Province many more industrial projects much more important than the tramway project which are under it s active consideration and if matured are bound to give a great fillip to the industrial development of this Province. The institution is rich with potentialities and is capable of playing it part in the future constructive history of Lahore and this Province. What is needed is a benevolent interest and encouragement from the Government. With the Hon’ ble Major Sirdar Sir Sikander Hyat Khan our distinguished premier at the helm of affairs whose abiding interest in the industrial development of this Province is so well known we face the future with ardent hope and deep satisfaction.

The Company has witnessed during its brief career two of the world's greatest wars the European War of 1914 and the present great conflagration which aims at destroying all that is best in modern civilization. Although geographically at a safe distance from the theatre of war we are very much in it. Besides the minute-to-minute strain which every man or woman living in this country is feeling this company along with a long range of electric licensees all over India is suffering from exceptional difficulties in the way of higher cost of maintenance of generation and of engineering articles. Prices have already soared high and it is difficult to predict the extent to which they would rise. Our faith in the ultimate victory of the British Arms remains unshaken and the marvelous successes which our armies have recently achieved in Africa have proved that the forces of evil are going to be crushed soon and an everlasting peace will emerge out of the present conflict. The stirring experiences of our gallant Premier during his recent expedition have further strengthened our faith in our ultimate victory and we hope the world will soon be free from the blasting tragedy through which it is at present passing.

Before I resume my seat I may be permitted to say a few words more. Your Excellency is due in two brief months for well-earned retirement; and I wish to take this opportunity to express my innermost feeling as to how much we would miss you. You have known forty-one years service in the Punjab years crammed with labour tact boldness of purpose and success; years in which you won the hearts of thousands high and low; years during which you have been a beacon light to the progress of this Province. We shall never forget your work for us and to-day we cannot but sincerely wish your Excellency a long and prosperous life and may your days of rest be as peaceful as your days of work were arduous.

Speech made by His Excellency Sir Henry Craik. Governor of the Punjab at a luncheon party on the occasion of his visit to the Power House of the Lahore Electric Company at Shahdara on Saturday the 25th of January 1941.

RAI BAHADUR SAHIB AND GENTLEMEN.

I have listened with much interest to your account of the growth and expansion of your Company in the last 30 years. I am reminded of the words of the late Poet Laureate who writing of the peoples of the East said. Their wise men have seen the electric light in the West and come to worship. There is perhaps no modern invention of western science which has made a greater appeal to the Orient than electricity----none. I think which is more likely to revolutionize the Orient's immemorial way of life . You have said that in Lahore the naked oil lamp has gone un-honored and unsung. Another ancient and simple mechanism is fast going both in Lahore and throughout the Province and that is the hand-drawn punkha. But I hope its praises will not be entirely unsung. The next fifty years will I believe see more rapid and more startling changes. You have already promised us in Lahore the advantage----perhaps I should say the doubtful advantage---- of a modern tramway system. But is it altogether fanciful to imagine that some of those now living will see throughout the villages of the Punjab night turned into day water brought from the bowels of the earth by pressing a button and the time-honored dung cake replaced by the electric cooker?

As a pioneer of electrical development your company has played a notable part. It was the first Electric Supply Company in the field in this Province and its activities extend now not only to many towns in the Punjab but to towns in other Provinces as well. A future of useful and I hope successful activity lies before it. I welcome as I am sure do the other guests here to-day the opportunity of seeing something of the secrets of its working.

I need hardly say that Government no less than your are keenly interested in the development of electricity. When our great Hydro-Electric project was undertaken there many prophets who foretold dismal failure and irreparable loss; but as a matter of fact we are already getting sufficient revenue to meet all working expenses all maintenance and depreciation charges and also to pay a portion of the interest charges. The demand for electric current is steadily and even rapidly growing. Last year the number of new consumers amounted to 3,300 which constitutes a record. The system is already almost fully loaded and in order to continue expansion further power is needed. It was intended to provide this by setting up a steam power station somewhere near Lahore. Owing to the war this addition may have to be postponed; but I have no doubt that once the necessary machinery can be obtained again freely from overseas electrical development in this Province will go forward at an ever increasing pace.

On behalf of my fellow guests and myself I thank you. Rai Bahadur and your co-Directors for your hospitality to-day and for the opportunity you have given us of inspecting your Power Station. You have referred in your remarks to my lengthy service in this Province in kindest of terms which I assure you I most deeply appreciate. I think you know without my telling you how deep is my regret at leaving the Province in which I have worked so long the people whom I have learnt to love. But it is tempered by the thought that I am saying good-bye at a time when the Punjab is not only in a strong financial position but also I sincerely believe on the threshold of some real industrial progress. Let me conclude by repeating in the words of the psalmist the prayer I have in my heart for the future of the Punjab--- "Peace be within thy walls and plenteousness within thy palaces."

APPENDIX I

LAHORE:

28TH February 1911.

SANITARY ENGINEER TO GOVERNMENT PUNJAB

Public Works Department,

Lahore.

Sir,

In submitting the accompanying tender for the consideration of Government the Directors respectfully desire to draw attention to the fact that the particulars and details of the scheme on which it is based were worked out after a very careful study of the local conditions by Mr. Griffin Resident Engineer and General Manager of the Delhi Electric Tramways and Lighting Company Limited, when it was the intention of the Company to submit a tender for the concession for the supply of electric power and light in Lahore Municipality.

These particulars and details have been brought to the Bank under the following circumstances. On Saturday the 24th instant it came to the knowledge of the Local Board of the company at Delhi by sire that the Directors of the Board in London had resolved to withdraw from tendering. It was then that the members of the Local Board approached the Bank with the suggestion that the Bank should take the

matter in hand and tender for the concession. In order that the Bank's action in this matter and the action of these associated with it at this time may not be misunderstood we desire it to be known that steps have been taken to inform the London Board of the Delhi Electric Tramways and lighting Company Limited of the action the Bank has been induced to take and they have also to say that the Bank is encouraged to believe that the Company will be willing eventually to come to an arrangement with the Bank by which if the concession is obtained the services of Mr. Griffin in the matter of supervising in the construction of plant will be placed at the disposal of the Company proposed to be formed for the purpose and further that in the organization of a scheme of management for the Lahore Company the Delhi electric Tramways and Lighting Company Limited may co-operate.

In the event however of Mr. Griffin's services not being available the Bank will make an effort to engage Mr. Pfeiffer whose expert knowledge in electrical matters is recognized and failing him and expert will be obtained from England through Messrs. Siemens Brothers or Messrs. O Gormon and Company who are well-known to Mr. Harkishen Lal the Managing Director of the Bank.

The Directors beg to give you an assurance in all earnestness that a first class Electrical Engineer will supervise the work in the construction of the installation and will remain in charge and be responsible for the running of it. Mr. Harkishen Lal who will take a personal interest in the affairs of the new Company made a careful study of electrical matters in Europe while last there. He has been for two years on the local Board of the Delhi Electric Tramways and Lighting-Company Limited and in close touch with the most approved methods of obtaining and economic and reliable supply of current and Mr.James Currie who is associated with the Bank in tendering for this enterprise is also a member of that Board at Delhi. These gentlemen since they joined the Delhi electric Tramways and Lighting Company's Board exerted their influence successfully in extending the use of power for lighting and fans in that city and its application to small industries.

The Directors venture to hope that you will gather from this that the responsibilities attached to the concession if it is granted are fully realized by them and that they are prepared in assuming these to equip the new Company with expert knowledge of so high an order as that applied at Delhi.

It is proposed to establish a Company with limited liability expressly for the purpose of taking over the concession and the licence and to work the undertaking with a capital of Rs. 7,50,000 which would be disposed of by:-

Cost of Power Station say	2,50,000
Substation	40,000
Mains	1,50,000
Superintendence of work during construction	20,000
Cost of existing plant	30,000
Interest during construction and expenses in connection with the inspec-	
tion of plant and formation of company and other minor contingencies 55,000	
To provide for future extension of mains	1,25,000

Balance for eventualities and possibilities	80,000
	7,50,000

It is proposed to raise the capital in the following way:-

By Debeutures	5,00,000
" Ordinary shares	2,50,000

The Directors are prepared to submit for the inspection of Government the complete scheme on which they are basing their estimate and which will become the working plan for the concern. It will be seen from it that ample provision is made for contingencies and at the Power Station for space to install supplementing generating plant. In making provision for the initial capital outlay on mains they anticipate a hearty co-operation from the Municipality and from the Public. It will be the intention of the Company to meet the demand for current in a liberal sprit.

The Company should not they think be expected to give the Municipal supply any point throughout the Municipal area as referred to in clause 14 of the condition but will be perfectly willing and will make every effort to lay mains to a reasonable distance from the mains shown on the plan or at any time from existing mains.

With regard to the existing installation they would beg to point out that although their figures may be considered moderate they fear they will have to be sold at a sacrifice by the new Company.

With regard the penalties for failure referred to in schedule No.5 they desire to draw your attention to the provision inserted in the Remarks column. With a view to safeguarding the concessioners they think you will agree that the modifications suggested are reasonable.

With regard to the cost at which energy could be supplied to small industries, the charge will not exceed 0-3-0 per unit and in cases of regular customers it may be much lower as it will be in the interest of the Company itself to get a fair load during the day throughout the year.

It will also be the policy of the Company to place current within the reach of the small man in the bazaar in his shop and in his dwelling house at a reasonable uniform rate as it is being done at Delhi. They may mention here without an breach of confidence that the Local Board of the Delhi Electric Company has strongly advocated this policy and there is now in operation in Delhi a scale of charges which enables a shopkeeper to get the use of a lamp at fixed charge as low as Re.1-8-0 per month. They have every reason to believe that the scheme would be met with favor in the bazaars of Lahore.

The deposit of Rs.1,000 as required is sent herewith and a Reference Map is attached.

We are Sir,

Your obediently servants,

For the People's Bank of India. Ltd

(Sd.) DEOKI NAND

GENERAL MANAGER.

Tender for the Concession for the Supply of Electric Power and Light in Lahore Municipality.

GENERAL CONDITIONS.

1. Preliminary:- It has been decided to give a concession for the supply of Electric power for the lighting and fans of Government buildings at Lahore to an Electric Supply Company who offers to do so on the most favourable terms.
2. Conditions to be met:- The general conditions which must be complied with by the Supply Company are as follows:-
3. Voltage of supply:- A direct current supply at a pressure of 220 volts between conductors must be given at the terminals of the internal wiring connections on the existing bracket of shackles on each of the buildings named in Schedule 1.
4. Maximum demand:- Schedule I also shows the maximum demand kilowatt which will be required each building.
5. Variations of pressure:- The variation of voltage at the building must in no case exceed 15 volts in 220.
6. Licence:- The Supply Company whose tender is accepted will be at liberty to take out a licence for the supply of power for all purposes throughout the Municipal area of Lahore and the licence will not be opposed by the Local Government or Municipality.
7. Rights of way:-The Supply Company will be permitted a free right of way over all Municipal or Government land with the exception of those areas of Municipal or Government land shown in schedule 2.
8. Taxes:- The Supply Company will also not be charged any pole tax or other rates or taxes than described in Schedule 4.
9. Rates of supply to Government:- In return for these concessions the Supply company will be expected to supply electric power for lighting fans and general motive power purposes to the Local government and to the Municipality of Lahore specially low rates.
10. Guaranteed demand:- On the other hand the Local Government are prepared to guarantee a L=total demand of not less than 1,50,000 units per annum. The details of this demand are shown in Schedule 3. The Local Government shall be at liberty to renew their contract with the Supply Company at the expiration of ten years for a further period of ten years and so on from time to time should they so require.
11. Termination of guarantees:- This guarantee will hold good for a period of not less than 10 years from the date on which the Company commences to give a continuous supply.
12. Variation of demand:- The Local Government are moreover prepared to enter into an agreement to pay for the whole supply guaranteed should the actual requirement for electric power through any unforeseen cause. Fall short of the above-named quantity per annum i.e. 150,000 units.
13. The Company tendering is also to complete a statement showing the rate at which they are prepared to supply power to the Local Government for this guaranteed demand of not loss than 150,000 units per annum at the buildings named in Schedule 1.
14. Municipal supply:- The Lahore Municipality do not hold themselves bound under any conditions whatsoever to take a supply from the Company even should their tender for the concession be accepted. The Company tendering is nevertheless to fill in a statement showing the special rates at which they are prepared to supply electric power to the Municipality at any point throughout the Municipal area subject at all times to the

conditions laid down in the Indian Electricity Act of 1910 should the Municipality eventually wish to take such supply.

15. Extended demand of Local Government:- It is also anticipated that the Local Government will required a larger supply of power than that now guaranteed the rate at which the Company is prepared to supply this power is to be the same as that at which they are prepared to supply power to the Municipality.
16. Termination of special rates:- The Supply Company shall be held bound to comply with the undertaking contained in each statement for a period of 10 years from the date of commencing to give a continuous supply or in default the Local Government shall be at liberty to immediately terminate the guarantee to take not less than 150,000 units per annum.
17. Supply to the general public:- The Company tendering is also to fill in a statement showing the maximum rates at which they are prepared to supply power to the general public for various purposes.
18. Statement of rates:- A form for the above 3 statements called "Statement No 1" is attached herewith and is to be completed in every particular and signed by the Company tendering.
19. Date of commencing the supply:- The Supply Company whose tender is accepted will be required to start the supply of electric power at buildings named in Schedule 1 not later than 12 months after the date of acceptance of tender or in default to forfeit a sum of Rs. 300 for every week that the supply remains un provided.
20. Purchase of existing installation:- The Supply Company whose tender is accepted will be required to purchase from the Local Government the whole of the existing installation from and including the power house boilers plants machinery mains poles insulators brackets and lamps up to but excluding the intake brackets on the buildings named in schedule 1.
21. Cost of present installation:- The Company tendering is required to fill n and sign the attached Statement No. 2 showing what price they are prepared to offer for the whole of the installation as it stands.
22. Power Station sites:- The existing power house site will not be available and the Supply Company will have to make their own arrangement for a power house site. Assistance as far as possible will be given by Government in acquiring the site.
23. General information:- The Company tendering is also to fill in a statement contained in Schedule 5 giving the information required in full detail to enable the Local Government to be thoroughly satisfied as to the Company's credentials and eventual ability to guarantee a satisfactory supply both financially and technically.
24. Obtaining the licence:- The Company whose tender is accepted will be required to apply for a licence within one month of the tender being Sub
25. Security deposit:- As soon as the licence has been granted the Supply Company will be required to sign an agreement and deposit . Indian Government promissory notes to the face value of Rs. 5,000 as a guarantee to the effect that they will comply with the undertakings contained in their tender of in default forfeit the whole of this security deposit. This security deposit will be returned when the Supply Company has given a continuous supply of electric power for six consecutive months.
26. Meaning of continuous supply:- For the purpose of clause 25 a supply shall be deemed continuous if the full supply of electric power required be available at the buildings named in Schedule 1 during not less than 23 hours a day, or not less than 175 days during the six consecutive months specified.
27. Penalties for failure:- The Supply Company shall be liable to pay the penalties shown in Schedule 5 for each failure of supply.

28. Submission of tenders:- Each tender is to consist of the whole of this specification with Statements 1 and 2 a reference map and Schedules 1 to 5 attached all completely filled in and signed by two Directors of the Company tendering and accompanied by earnest money amounting to Rs. 1,000 which shall be entirely forfeited to the Secretary of State for India in Council should the Company whose tender is accepted fail to either apply for a licence within the time specified or to deposit the security amounting to Rs. 5,000 when called upon to do so after obtaining licence. The Rs. 1,000 of earnest money will be returned as soon as the security is deposited.
29. Unmounted copies of map of the Civil station and Environs Lahore at Rs.6 each can be obtained from Sanitary Engineer on application. The paper of map being very thin it is recommended that mounted copies should be applied for, for which additional charges for mounting shall have to be paid.

SCHEDULE 1

Government building s at which the supply is required.

Item No.	Name of Building	Maximum Demand in killowatts	Remarks.
01	Power station	.66	---
02	Upper Mall	5.72	---
03	Montgomery Hall	18.50	---
04	Post Office	7.92	---
05	Telegraph Office	11.00	Includes power for
06	Chief Court	9.90	pump.
07	Accountant General's Office	7.92	
08	Divisional Judges	.66	
09	Forest Office	1.50	
10	Town Hall	2.20	
11	Chemical Examiner	.44	
12	District Court	3.52	
13	Superintendent of Police	.88	
14	P.W.D. secretariat	9.24	
15	Civil Secretariat	3.08	
16	Financial Commissioner's Office	3.30	
17	Commissioner's Office	1.10	
18	Combined Offices	3.74	
19	Inspector General Of Police	1.10	
20	Director Land Records	.66	
21	Government House	23.00	Includes power for pump.

Note. The above figures show what is actually in use at present.

Large extensions to include all Government buildings as likely to take place in the near future. For details of fans and lights and probable future extensions 800 Schedule A 1 attached.

SCHEDULE A 1.

Statement of Electric fans and lights required for Government Offices, Colleges, Schools, etc, at Lahore.

Buildings	Present Number of		Proposed extension		Total Number of		Current in amperes reqd. for		Total Amperes.	Kilo-watts.	Remarks
	Fans	Lights.	Fans.	Lights.	Fans.	Lights.	Fans.	Lights.			
Power Station		8				8		3	3	.66	
Upper Mall		79		11		90		30	30	6.60	
Montgomery Hall	15	210			15	219	7	78	85	18.70	
Post Office . .	21	58	60	10	81	68	40	23	63	13.80	
Telegraph Office	31	68			31	68	15	23	50	11.00	Includes 12 L for pumps.
Chief Court, Punjab New Accountant General's Office	89				89		45		45	9.90	
Old accountant General's Office	73				73		36		36	7.92	
Forest Office	6		21		27		13		13	2.76	
Town Hall	13		1		14		7		7	1.50	
Chemical Examiner's Office (Old P.W.Deptt)	20				20		10		10	2.20	
District Courts	3		20		23		11		11	2.42	
Office of Supdt.Of Police	32		50		82		41		41	9.02	
Office of Superintending And Executive Engineer Provincial Works	7		3		10		5		5	1.10	
Small Causes Court			28		28		11		14	3.08	
Central Training college Residence of the Principal Central Training College Etc.					13		6		6	1.32	
			13		13		7		7	1.32	Includes 16 L for pumps.
			95		95		47		47	10.34	
P.W.D. Secretariat	84				84		42		42	9.24	
Civil Secretariat	28				28		11		14	3.08	
Financial Commissioner's Office	30				30		15		15	3.30	Includes 8 are lamps.
Commissioner'sOffice	10				10		5		5	1.10	
Combined Offices	35		13		35		17		17	3.74	

Inspector General & Deputy General of Police.	11				11		5		5	1.10	
Director, Land Records	6				6		3		3	0.66	
Government House	15	292	2	8	17	300	8	100	124	27.28	
New Police Lines			3		3		2		2	.44	
Government school			130		130		65		65	14.30	
Professors' quarters			12	20	12	20	6	7	13	2.86	
Punjab Public Library			10		10		2		5	1.10	
Government Press			45		45		22		22	4.84	
Government College			50		50		25		25	5.50	
vaccine Depot			3		3		2		2	.44	Includes
Meteorological Office			3		3		2		2	.44	20 are
Govt. Work House			3	12	3	12	2	4	6	1.32	lamps.
Lunatic Asylum			42	158	42	158	21	90	111	24.42	do
European Clerks' cottage			128	270	128	270	64	90	154	33.88	Includes 10 are lamps.
New University Hall			25		25		12		12	2.64	
Senate Hall.			20		20		10		10	2.20	
Chemical Laboratory, Government College			30		30		15		15	3.30	
Principal's House, Govt. College			10	20	10	20	5	7	12	2.64	
Boarding House Govt. College			110	120	110	120	55	40	95	20.90	
School Of Art			60		60		30		30	6.60	
Director of Public Instruction			30		30		15		15	3.30	
Excise Commissioner			20		20		10		10	2.20	
Railway Technical school			60	100	60	100	30	33	63	13.86	
Veterinary College			20		20		10		10	2.20	
Veterinary School			22		22		11		11	2.30	
Lady Lyall's Home			34	51	34	51	17	17	34	7.48	
Medical School			102	80	102	80	51	27	78	17.16	
Mayo Hospital			196	339	196	339	98	113	211	46.42	
Central Jail.			18	380	18	380	9	220	229	50.38	
District Jail			6	305	6	305	3	195	198	43.56	
Female Jail.			3	109	3	109	4	83	87	19.14	
										489.02	

EDWIN O. GILBERT,

Executive Engineer,

Second Provincial Division, Lahore

SCHEDULE 2.

Areas of Municipal or Government lands on which rights of way will not be permitted.

Government and the Municipality reserve to themselves the power to refuse the right of way on any Government or Municipal lands it is considered that the erection of poles or structures on such lands would be unsightly or cause any inconvenience.

SCHEDULE 3.

Details of the guaranteed demand of the Local Government.

Item No.	Consuming Device.	No.	Approximate Maximum Demand in Kilowatts	Approximated Units per annum	Remarks.
01	D.C Ceiling fans	529	58.0	69.600	
02	Exhaust fans	1	1.1	1.320	
03	Desk Fans	Included	In ceiling fans	-	
04 -	110-watt Nernst lamps	79	870	19.250	
05	32 M.F	636	46.64	58.047	

SCHEDULE 4.

List of Rates and Taxes which will be levied by the Municipality of Lahore.

No special rates or taxes will be levied beyond those paid by the inhabitants of Lahore. No pole tax will be imposed.

SCHEDULE 5.

Statement of penalties for failure of supply affecting on-half of the connection.

Item No.	Duration time of failure.	Penalty to be paid for each occasion.	Remarks.
01 - 02 - 03 04 - 05 06 - 07	Up to 15 minutes. 15 minutes to 1 hour. Ditto 1 hour to 6 hours Ditto Ditto 6 hours to 21 h ours. For every 6 hours over 21 hours upto limit of one week.	No Penalty. - For first 5 failures. No penalty. For every failure after the 5th Rs.25 For Ist failure No penalty. For every failure after the Ist Rs.50 For every failure including Ist Rs.200 Rs. 50.	Provided that in no case any penalty be inflicted in respect of any default where the fault has in the opinion of the Lieut-Governor of the Punjab been caused by inevitable accident or force majeur of was of so slight or unimportant a character as not to materially affect the value of the supply

SCHEDULE 6.

Information to be supplied by the Company tendering.

Item No.	Information required	To be filled in by the tender.	Remarks
Financial 01 - 02 03 04 05 06 Technical 01	Name of Company Name of Managing Director Name of two Directors. Bank references Present business of Company Where carrying on business at present. Situation of proposed Power Station.	 The people's Bank of Indian Limited. L. Harkishan Lal Mr. Ganpat Rai Lahore and elsewhere. Off Mc leod Road at the rear of S.E. Ex Engr.	 Give reference

		Officer.	To map.
	Proposed system of generating power		
02	Proposed system of distributing power	Continuous current 3 wire.	
03	Proposed generating voltage and phase. Proposed distributing voltage.	440 to 480	
04			
05	Situation of proposed Sub-Station.	220 at consumer's terminals (440 per power)	
06			At the rear of the Horticultural Gardens or other position approved.

STATEMENT No. 2.

Statement of rates at which power will be supplied.

Item No.	To whom supplied	For what purpose.	To be FILLED IN BY COMPANY TENDERING. Maximum demand System.			Remarks.
			Rates per K.W. of maximum demand.	Rate per unit.	Flat rate system Rate per unit	
01	Local Government	Lighting		In As. 4	In As. 4	All rates metered at consumers terminals.
02	Guaranteed Supply	Fans		In annas 3 ½	4	
03	Telegraph Department				4	
04	Local Govt. and Municipality unguaranteed supply	Lighting				*Note. 1
05	Ditto	Fans & heating			4	* For a load factor up to 25 % For a load factor over 25
06	Ditto	Street light			4	

						% upto 33 ½ %
07	Ditto	Motive power all hours			3 ½ 3	For a load factor over 33 ½ % For a load factor upto 7 ½ %
08	Ditto	Motive power during day light only.		At contact rates to be specially arranged having regard to situation and minimum required	3 2 ½	For a load factor over 7 ½ % upto 15% For a load factor over 15% upto 20%
09	Ditto	Bulk supply at a point.			2	*i.e. anything over100 K.W. at the generating voltage.
10	General Public Lighting.				8	Less 25% for prompt payment.
11	Ditto	Fans heating			8	Ditto Ditto
12	Ditto	Motive power all hours			6	Ditto Ditto
13	Ditto	Motive power during day light only.				As per item Nos.7 and 8 above respectively

*Note 1.--- 100 percent load factor shall be taken as 8,700 hours per annum.

Dated Lahore 28th February, 1911. _____signature

STATEMENT No. 2.

Purchase price of existing installation.

Item No.	Name of article.	Price to be Paid	Remarks
01	Building complete	Rs	
02	Boilers, etc.		
03	Engineers, ets.		
04	Electric machinery.		
05	Switchhoards and cable connections.		Say a lump sum of Rs.
06	Mains, Poles and brackets.	12,250	30,000 omitted later.
07	Lamps and brackets.		On an annual rental of rupees one thousand
	Grand Total Rs.		

We, the undersigned as representatives of the _____

Do hereby agree to purchase the whole of the existing Electric Power Installation as specified in clause 2 of attached specification for the total sum of Rs.____made Up as detailed in the above schedule.

For the People's Bank of India, Limited.

(Sd.) DEOKI NAND,

General Manger.

(Sd.) HARRKISHAN LAL

(Sd.) GANPAT RAI DIRECTORS.

Dated Lahore 28th February, 1911.

We the undersigned as representatives of_____do hereby tender to

Supply Electric Power for lighting fans and various motive power purposes to the authorities and public bodied named at the rates stated within the attached Statement No. 1 subject to the conditions laid down in the attached specification and its accompanying schedules No. 1 to 6.

The People's Bank of India Limited.

DEOKI NAND

General Manager,

HARKISHAN LAL

GANPAT RAI. DIRECTORS.

Dated Lahore 28th February 1911.

APPENDIX I I.

The 25th November, 1912.

No. 3612___Notification___It is hereby notified for general information that the licence published bolow has been granted to the People's Bank of India, Limited for the supply of Electrical Energy for all purposes within the municipal area of Lahore:-

LICENCE FOR THE SUPPLY OF ENERGY GRANTED BY THE GOVERNMENT OF PUNJAB UNDER THE INIAN ELECTRICITY ACT IX OF 1910.

Licence is hereby granted to the People's Bank of India, Limited to supply Electrical Energy for all purposes in the area as therein defined with the powers and upon the and conditions as specified below:-

Short title 1. This licence may be cited as the Lahore Municipal Electric Licence. 1912.

2. The several words terms and expressions to which by the Indian Electricity Act IX of 1910 or the rules thereunder meanings are assigned shall have in this Licence the same respective meanings provided that in this Licence.

(1) The Act shall mean the Indian Electricity Act IX of 1910.

(2) The expression"the Licence" shall mean and include the said People's Bank of India Limited and their permitted assigns; and

LIST Of Government buildings at which the supply is required.

Item No.	Name of building	Maximum demand in K.W.	REMARKS.
01	Power Station	0.66	
02	Upper Mall	5.72	
03	Montgomery Hall	18.50	
04	Post Office	7.92	
05	Telegraph Office	11.00	Includes power for
06	Chief Court	9.90	pump
07	Accountant General's Office	7.92	
08	Divisional Judge's Court	0.66	
09	Forest Office	1.50	
10	Town Hall	2.20	
11	Chemical Examiner	0.44	
12	District Court	3.52	
13	Superintendent of Police	0.88	
14	Public works Department Secretariat	9.24	
15	Civil Secretariat	3.08	
16	Financial Commissioner's Office	3.30	
17	Commissioner's Office	1.10	
18	Combined Offices	3.74	
19	Inspector General of Police	1.10	
20	Director Land Records	0.66	
21	Government House	23.00	Includes power for pump

Under-Secretary to Government Punjab Public Works department Buildings and Roads Branch. No.

3758-62 G dated 4-12-1912.

Copy forwarded for information to:-

(i) The Financial Secretary to Government Punjab.
(ii) The Superintending Engineer 3rd Circle.
(iii) The Sanitary Engineer to Government Punjab.
(iv) The Electrical Inspector to Government Punjab.
(v) The Commissioner Lahore Divison.

(Sd.) W. GARFORTH,

Captain. R.E.I

Under-Secretary to Government Punjab Public Works Department Buildings and Road Branch.