

A NETWORK OF POWER? THE EUROPEAN ELECTRICAL INDUSTRY AND THE GRID FOR THE UNITED STATES OF EUROPE, 1929-1937¹



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EBHA conference 2007, September. Geneva, Switzerland.

In December 1930 the government of Belgium made several proposals to the *Commission for Enquiry for European Union* (CEEU), part of the League of Nations (LoN).² One was related to international electricity exchanges. Belgium regretted the disappointing result of earlier attempt to come to a general international convention, ratified only by four and five European countries.³ The Belgian government considered that 'under present technical conditions such a problem is essentially a continental one'; instead of working on a global scale, a European solution would have immediate effects and could continue the work started by the League in this area:

*"The essential object of the European Union of which it is proposed to lay the foundations is to establish a system of constant co-operation among the peoples of Europe. The European Union represents an attempt to strengthen the links uniting these peoples and to develop their mutual relations, but it implies primarily that every European country should refrain, as far as possible, from taking any steps that might injure other European countries."*⁴

It noted that technological advancements in the field of electricity had led to long-distance transmission, also across borders. It noted that these exchanges became increasingly important, and at the same time ever more governed – and sometimes restricted – by national legislation. The CEEU was therefore asked to study this situation in a European framework:

¹ This paper reflects part of my dissertation research (tentative title: *Electrifying Europe. The power of Europe in constructing electricity networks*) into the conjunction between ideas on Europe and ideas of building and operating electricity networks. In turn, my research is part of the broader *Transnational Infrastructures and the rise of contemporary Europe* project (TIE Project). For more information see www.tie-project.nl.

² League of Nations Library archive (hereafter LoN Library), 'Proposals put forward by the Belgian Government for the agenda of the Commission of Enquiry for European Union, on December 11th, 1930', C.706.M.298.1930.VII / C.E.U.E/3., p.1.

³ Four in the case of the conventions on the transmission in transit of electric power, five in the case of the exploitation of hydraulic power. These two conventions were drafted by the LoN in 1923.

⁴ LoN Library, 'Proposals', p.1.

“We must already look forward to the time when these exchanges can no longer be limited to two neighbouring countries, but when they will have to extend the whole continent, which will have to be covered by an immense network of power distribution. It is important that national legislations should not stand in the way of such a programme and that a definite statute should be established to enable it to be carried into effect.”⁵

With the proposal accepted, Belgium was asked to provide additional information. The League’s Secretariat would in turn collect information on national legislation in Europe, in close cooperation with its Commission for Communications and Transit. On the 4th of November 1931 the Belgian government submitted its note on various aspects of transport and transit of electric power and the creation European electricity network in particular. The opening line revealed a positive stance towards a European grid:

“One of the results of the creation of a European electrical supply network would be to establish between the various countries a community of interests quite suitable to consolidate peace.”⁶

In addition, according to the note, only the construction of European electricity network could render possible an intensive and rational utilisation of Europe’s energy sources. At this moment such exploitation was hampered by the lack of electricity politics by the different countries. At forehand, it seems evident that all European countries are interested in the international exchange of energy. The countries with abundant resources have an interest in exporting and thus without have a need for importing.⁷ At the same time, it would help to establish peace in Europe.

ALIGNING POLITICS AND TECHNOLOGY

This paper discloses the particular history of the idea of a European electricity network in the 1930s, and traces its origins. Such an idea sprang from the electro-technical community – supported by industry – , but found its way into the European movement. A proposal for a federated state of Europe within the League of Nations,

⁵ LoN Library, ‘Proposals’, p.1.

⁶ LoN Archive, Box R2572, 9E/29306/26461: Transmission and Transit of Electric Energy – Correspondence with the government of Belgium, ‘Note. Divers aspects de la question du transport et du transit de l’énergie électrique et notamment du problème de la création d’un réseau européen.’ The original text is : “L’un des résultats de la création d’un réseau électrique européen serait d’établir entre les différents pays une communauté d’intérêts bien propres à consolider la paix.”

⁷ LoN Archive, Box R2572, 9E/29306/26461, ‘Note’.

brought the idea of a European grid into the realm of international politics. For a short period, approximately 1929 until 1934, efforts were made to study its feasibility. But its fate was intertwined with the failed idea of a United States of Europe.

The construction such a vast undertaking was to have certain advantages. The operation of such a network would, firstly, result in a more rational use of energy resources in Europe. The interconnection of thermal and hydroelectric power plants would bring about a better *economic mix*.⁸ But to many actors in this story, the interconnection of Europe's countries would also entailed an *idealistic mix*. In their eyes, the construction of a European high-voltage network could relieve unemployment, spark economic growth, development traditional Central and Eastern European economies, and at the same time create a spiritual and unifying European bond. With other words, the further rationalisation of Europe's energy economy was expected by many to be a panacea for main crisis and foremost fear of the Interwar; economic depression and war.

The promotion and spread of the idea of such a network was done by an elitist alliance of engineers, industrialists, and politicians. All were, in the first place, infused with the European idea, and second, at the same convinced that Europe was not only a political and economical project. To they it was also a technological one as well. Generally speaking, these actors were motivated their ideas by pointing at the crisis of capitalism on the one hand. For many involved, such a physical European network was seen as stronger bond than any paper treaty.⁹ A strong belief in planning, coordination, and rationalisation characterised them on the other. To many electrical engineers, small local electricity generation hardly was efficient. High voltage (HV) transmission technology enabled – and in their eyes legitimised – the construction of large power plants outside the direct vicinity of the area of electricity consumption. Business interests, checked by national protectionists measures, were a strong undercurrent as well.

But the ideal of one electricity network was hardly uncontested. The study done in Belgium already met considerable opposition from national economic interests

⁸ Thomas P. Hughes, *Networks of power: Electrification in Western society, 1880-1930* (Baltimore: Johns Hopkins University Press, 1983), p.

⁹ German architect Hermann Sörgel for example wrote that “[d]ie Verkettung Europas durch Kraftleitungen ist eine bessere Friedensgarantie als Pakte auf dem Papier; denn mit der Zerstörung der Leitungen würde sich jedes Volk selbst vernichten.” Herman Sörgel, *Atlantropa*, (Fretz & Wasmuth / Piloty & Loehle: Zurich / München, 1932), pp.118-119.

groups. In practice, unlimited and unrestricted exchanges of energy flows across borders was checked by growing role of (national) authorities. In the 1920s and 1930s, States increasingly recognised that domestic electricity systems needed further development, and had summoned legislation protecting energy supply and resources as national treasures. The fate of a European electricity network was eventually sealed by, first, the high probability of a new war, and finally, by the actual outbreak of war. The rallying point of this string of congenial string of people from politics, engineering, and business, was the CEEU. The CEEU was installed in 1930, following Aristide Briand's idea to forge a United States of Europe, which he launched in September 1929. In his appeal to the Assembly, which was discussing economic problems, he emphasis that 'some sort of federal bond' between the people of Europe was needed to tackle the economic issues at hand. Briand also hoped to rejuvenate the role of the League of Nations, which seemed hardly authoritative enough to enforce international conventions.

The Briand plan, in retrospect, seems an ultimate attempt to forge European security and stability, both politically and economically. Historians' judgements on the impact of the proposal are diverging; to one Briand's initiative represented the 'highwater mark of the European movement in the Interwar period', to another even 'the most optimistic historian would find it hard to maintain that Briand's European seed fell on fertile soil in September 1929'.¹⁰ According to Peter Stirk the inadmissible responses led to 'first-class burial' as Briand's plan was handed over to League Committee for further study.¹¹ Whether burial or not, within in the League's machinery the CEEU was created. This Commission would over time disappear in the margins without real success.

This, in turn, was not to blame on the underlying idea of European union as such, but much more with timing. Briand's idea and its consequence took place in the 'hinge years' of the Interwar.¹² The period preceding the proposal gave occasion to moderate optimism. The Dawes plan came to aid the reparation struggles, and the spirit of

¹⁰ The first quote is from White, 'Regionalism vs. Universalism', p.90; the second from Wim Roobol, 'Aristide Briand's plan: The seed of European unification', in Menno Spiering and Michael Wintle, eds., *Ideas of Europe since 1914: The legacy of the First World War* (New York: Palgrave, 2002), pp.32-45, there p.42.

¹¹ Peter M. R. Stirk, *A history of European integration since 1914* (London: Pinter, 1996), p.38. Also see Vanessa Conze, *Richard Coudenhove-Kalergi. Umstrittener Visionär Europas* (Zurich: Muster-Schmidt, 2004), p.37.

¹² Zara Steiner, *The lights that failed: European international history 1919-1933* (Oxford University Press, 2005), p.633ff.

Locarno, after the 1925 treaty that arranged Franco-German relations, hang over Geneva. The months and years that followed vigorously crushed any sanguinity. The severe effects of the economic crisis would become exposed. The League stood rather toothless, as European political affairs suffered accordingly and as Hitler rose to power in Germany. On a similar note, during the early 1930s many key actors either deceased or migrated, or both.

Although Briand's call and the CEEU were the focal point of Europeanists in the 1930s, it was hardly without precedent.¹³ Most recognise the influence of Coudenhove-Kalergi and his Paneuropean Movement on Briand.¹⁴ Within the international labour movement, as we shall see, 'Europe' functioned as 'a unifying concept' since the early 1920s.¹⁵ Within the financial and corporate world, the call for a 'Europe des producers' strengthened.¹⁶ Obviously, the continuous Franco-German antagonism also propelled thinking in international, if not European solutions. Louis Loucheur¹⁷ was the driving force behind the International Economic Conference of May 1927, hosted by the League of Nations. Economic rationalisation, the development of relations between producers under state supervision, lowering of custom tariffs.¹⁸ His plan, however, met opposition from the within the League and from several states.¹⁹ Briand's plan, however, did see some success within the League and following outside.

¹³ For an overview of all sorts of European-inspired manifestations, see: Carl H. Pegg (ed.), *Evolution of the European idea, 1914-1932* (Chapel Hill ; London: University of North Carolina Press, 1983).

¹⁴ Roobol, 'Aristide Briand', pp.37-38; Ralph T. White, "Regionalism vs. Universalism in the League of Nations: A study of 'Pan-Europeanism' and the League secretariat between 1925 and 1930, based on material in the League archives in Geneva", in: *Annales d'études internationales*, 1, (1970), pp.88-114; and Antoine Fleury, "Avant-propos", in: Anthoine Fleury and Lubor Jílek (eds.), *Le Plan Briand d'Union fédérale européenne: Perspectives nationales et transnationales, avec documents* (Bern: Peter Lang, 1998), p.XI.

¹⁵ Patrick Pasture, "The Interwar origins of International Labour's European commitment (1919-1934)", in: *Contemporary European history*, 10, 2, (2001), pp.211-237, there p.222ff.

¹⁶ Éric Bussière, *La France, la Belgique et l'organisation économique de l'Europe, 1918-1935* (Paris: Comité pour l'histoire économique et financière de la France, 1992), p.315. Also see Franck Théry, *Construire l'Europe dans les années vingt: L'action de l'Union paneuropéenne sur la scène franco-allemande, 1924-1932, Euryopa études 7* (Geneva: Institut européen de l'Université de Genève, 1998), in particular Chapter IV, p.63ff.

¹⁷ Loucheur was an entrepreneur in the electricity industry, heading the Société Giros et Loucheur. He was a prominent member of the Paneuropa movement, participating in the Economic Section. During WWI, Loucheur replaced Albert Thomas as Minister of Armaments. He acted as Minister of Reconstruction until the abolishment of that department in 1920.

¹⁸ Théry, *Construire l'Europe*, pp.65-66.

¹⁹ Éric Bussière, "L'Organisation économique de la SDN et la naissance du régionalisme économique", in: *Relations internationales*, 75, (1993), pp.301-313, there pp.306-307.

INTERNATIONAL VS. NATIONAL

As we shall see, plans for a European network were not dismissed as utopian or ridicule within the electro-technical industry, as the latter already was very internationally oriented. It also had an interest in constructing and financing such a large network. Since the end of 19th century, a transnational class of people, that support the constant progress by holding congresses, conferences, and forming associations.²⁰ Transmission lines continued to cover longer distances. In 1921 it was possible to transmit electric power from Nancy, France, via Switzerland to the area around Milan – a distance of approximately 700 km.

Since the 1890s, the growth of network size and power plant capacity necessitated the acquisition of sufficient capital. Several passed before tramways and electricity plants were in operation, so shares or obligations could not be issued immediately. As a consequence, the long-term finance of the undertakings was separated from the emission of titles. Therefore, several electrical enterprises were formed by – mainly – German electric equipment manufacturers, in close collaboration with Swiss banks. These so-called *Unternemersgeschäfte*, with Swiss sieges, planned electrification projects, and supervised the construction of the plants.²¹ Relations between the holding companies, banks and equipment manufacturing firms, and the electric companies remained close. Representatives of the holding companies usually sat in the board of directors of the power company. Another common feature of the Swiss-based holding companies was to establish specific trusts, or regional sub-holding companies, in countries where much work could be done. Oskar Oliven, who wrote a well-known Interwar plan for a European electricity network, worked for GESFÜREL which was a subsidiary company of Elektrobank, a holding company of AEG and *Crédit Suisse* and Berliner *Handels-Gesellschaft*.²²

²⁰ Christophe Bouneau, "Les réseaux de transport d'électricité en Europe occidentale depuis la fin du XIXe siècle: De la diversité des modèles nationaux à la recherche de la convergence européenne", in: *Annales historiques de l'électricité*, 2, (2004), pp.23-37, there pp.25,31-32.

²¹ Peter Hertner, 'Les sociétés financières suisses et le développement de l'industrie électrique jusqu'à la première guerre mondiale', in Fabienne Cardot, ed., *1880-1980. Un siècle d'électricité dans le monde: Actes du Premier colloque international d'histoire de l'électricité* (Paris: Presses universitaires de France, 1987), pp.341-356, pp.342-343. This kind of entrepreneurship was not limited to electricity. Hertner also gives examples of railway undertakings. *Ibidem*, p.344.

²² Luciano Segreto, "Financing the electric industry worldwide: Strategy and structure of the Swiss electric holding companies, 1895-1945", in: *Business and economic history*, 23, 1, (1994), pp.162-175, there p.164.

Another channel which helped to cement an international community and spread ideas the establishment of international organisations dealing with electricity. The International Council on Large Electric Systems (CIGRE, 1921) acted as a platform for the exchange of information on electricity generation and transmission in large systems. Working more broadly, the Britain-based World Power Conference (WPC, 1924) was set up as a forum for to discuss the world's emergent energy.²³ The International Union of Producers and Distributors of Electrical Power (UNIPED, 1925) was established by the electro-technical industries of Italy, France and Belgium, but quickly saw more members adhering.²⁴ Its prime task was the “the study, at international level, of all problems whose resolution is likely to promote the electrical energy industry, in particular by extending its scope, increasing the efficiency of its installations, and the improving the operation of its various departments, with the aim of continually perfecting the quality of service and making it available to users at optimal economic conditions”.²⁵

These newly emerged international organisations were instrumental, as electric engineers could communicate with kindred spirit. To many engineers, their work was indeed seen as a non-political way towards peaceful relations – running counter to the unsuccessful political attempts. This was at least what they claimed, rhetorically. In 1932 the president of the *Svenska Elektricitetsverksforeningen* exalted at a UNIPED meeting:

“Fortunately science is very international and independent of any form of borders and boundaries! That it is also allowed to me to express the hope which this co-operation will be extended until including all Europe. It makes us linked Europe, and that not only in the electro-technical sphere, but also - what is even more important - in the political relations. How the men of technology and science walk ahead, showing the way!”²⁶

²³ Hans-Joachim Braun, 'Die Weltenergiekonferenzen als Beispiel internationaler Kooperation', in Hans-Joachim Braun, ed., *Energie in der Geschichte: Zur Aktualität der Technikgeschichte. 11th symposium of ICOHTEC* (Düsseldorf: 1984), pp.10-12.

²⁴ For UNIPED, see Henri Persoz, '40 ans d'interconnexion internationale en Europe. Le rôle de l'UNIPED', in Monique Trede, ed., *Electricité et électrification dans le monde. Actes du deuxième colloque international d'histoire de l'électricité, organisé par l'Association pour l'histoire de l'électricité en France, Paris, 3-6 juillet 1990* ([S.I.]: Association pour l'histoire de l'électricité en France, 1992), pp.293-303.

²⁵ Paul K. Lyons, *75 years of cooperation in the electricity industry* (Brussels: Union of the Electricity Industry/EURELECTRIC, 2000), pp.12-13.

²⁶ UNIPED, *Compte-rendu du Quatrième Congrès International*, Paris, July, 1932, p.21. The original French text is : “Heureusement la science est toute internationale et indépendante de toute espèce de frontières et de bornes! Qu'il me soit permis aussi d'exprimer l'espérance que cette coopération sera étendue jusqu'à comprendre toute l'Europe. Il nous fait une Europe unie, et cela non seulement dans la

Although a growing international human network existed, the period after WWI was a bit of a paradox, as on the one hand, the character of electrical industry became increasingly national. Government action reflected their growing interest directing the construction of transmission lines and containing energy resources within their national borders. The period witnesses the birth of national energy policy. Post-WWII coal shortages certainly played a role. New technological possibilities, and the changed economic circumstances raised new questions. Transmission lines spanning vaster distances were obviously very costly – like large hydroelectric power stations –, and also inevitably crossed other people's property. Military considerations also played a role. This was of course connected to the strategic value of fuel for the national - and war - economy. This was yet another lesson of the period of war economy during WWI; a government should be able to seize total control over any aspect of the national economy if needed.

Already in 1891, in Switzerland it was tried to make coerce state ownership of unutilised waterpower.²⁷ A Swiss 1916 law gave the right to exploit, or grant a concession to do so, to the Cantons. At the same time, hydroelectricity transmitted across borders needed permission from the Bundesrat.²⁸ The French regulations of October 1919 had a similar tenor. Without a state authorisation or concession, no one was allowed to exploit waterpower. In France, export of electricity generated by French waterpower concessionaires was forbidden without state's approval, or without an international treaty.²⁹ In Italy, a separate law of October 1926 subjected both export and import of electricity to the approval by the Minister of Public Works. Authorised electricity imports were subjected to a tariff of 0,025 Lire per KWh.³⁰ The Swedish state overcame legal obstacles by enforcing more permissive expropriation laws, while joint-stock companies financed the new plants and lines. To keep a check on developments, the State Power Board, *Vattenfall*, was founded in 1909.³¹ Other

sphère électrotechnique, mais aussi - ce qui est encore plus important - dans les relations politiques. Que les hommes de la technique et de la science marchent en avant, indiquant le chemin!"

²⁷ See David Gugerli, *Redeströme: Zur Elektrifizierung der Schweiz, 1880-1914* (Zurich: Chronos Verlag, 1996), p.287ff.

²⁸ G. Siegel, *Die Elektrizitätsgesetzgebung der Kulturländer der Erde. Band II: Westeuropa* (Berlin: VDI - Verlag, 1930), pp.950-951. See articles 1 & 8.

²⁹ Siegel, *Westeuropa*, pp.165-181, and in particular articles 1 & 27.

³⁰ *Ibidem*, pp.564-565. In 1928 a two-tier tariff for electricity imports was issued; from November 16 until April 15 the levy remained 0,025 Lire per KWh, but between April 16 and November 15 it was lowered to 0,0015 Lire per KWh.

³¹ Arne Kaijser, 'From local networks to national systems: a comparison of the emergence of electricity and telephony in Sweden', in Fabienne Cardot, ed., *1880-1980. Un siècle d'électricité dans le monde:*

European countries, too, installed laws governing electricity exports; Czechoslovakia (1919), Finland (1919), Luxemburg (1924), Norway (1917), and Poland (1922).³² Belgium, Denmark, and Sweden belonged to the few countries without restrictions to export.³³ A nationalistic element was sometimes present, too, like in the Swiss case. In France, concession-takers were obliged when building distribution equipment to use equipment from domestic producers and suppliers since 1928, as the French government wanted to make French industry superior to German.³⁴ If this was not possible or unsatisfactory due to time, price or quality constraints, permission could be obtained from the Ministry of Public Works.³⁵

As a response to this development, a consensus emerged within international circles of electrical engineers, producers and entrepreneurs. They seemed to accept national embedding of electricity regulation, but this should not harm cross-border cooperation and flows of electricity. At the 1926 World Power Conference in Basel, Switzerland, a special session was wholly devoted to the exchange of electricity between countries. French engineer Etienne Génissieu, a prominent supporter of interconnecting electricity systems³⁶, gave an overview of existing interconnections between Switzerland and France. He wrote that still no general solution was found to exchange of electricity between nations. This was not dependent upon technical factors, but upon sheer diplomacy.³⁷ For Génissieu it should that electricity exempt from regular custom and fiscal duties.³⁸ German engineer Robert Haas, characterised as a supporter of U.S. style *laissez faire* in the electricity industry,³⁹ gave examples of electricity

Actes du Premier colloque international d'histoire de l'électricité (Paris: Presses universitaires de France, 1987), pp.7-22, there p.15.

³² Based on the overview in ECE, *Transfers of electric power across European frontiers. Study by the Electric Power Section* (Geneva: United Nations, 1952), pp.62-67.

³³ This point is also made by Julien Barrère, *La genèse de l'Europe électrique: Les logiques de l'interconnexion transnationale (début des années 1920-fin des années 1950)* (Université de Bordeaux-III, 2002) MA thesis, p.45.

³⁴ Harm Schröter, 'A typical factor of German international market strategy: Agreements between the U.S. and German electrotechnical industries up to 1939', in Alice Teichova, Maurice Lévy-Leboyer, and Helga Nussbaum, eds., *Multinational enterprise in historical perspective* (New York: Cambridge University Press, 1986), pp.160-170, there p.160.

³⁵ Siegel, *Westeuropa*, p.139.

³⁶ Christophe Bouneau, Michel Derdevet, and Jacques Percebois, *Les réseaux électriques au coeur de la civilisation industrielle* (Boulogne-Billancourt: Timée-Éditions, 2007), pp.41-43.

³⁷ E. Génissieu, 'Échanges d'énergie entre pays', in *Transactions of the World Power Conference, Basle sectional meeting 1926, vol.1* (Basle: E. Birkhäuser & Cie., 1926), pp.1001-1024, there pp.1001 & 1015.

³⁸ Génissieu, 'Échanges', pp.1014-1015.

³⁹ Bernhard Stier, *Staat und Strom: Die politische Steuerung des Elektrizitätssystems in Deutschland 1890-1950* (Verlag Regionalkultur, 1999), p.433.

flows between Germany and Switzerland. He thought it was remarkable that energy-rich countries fenced off their potential with laws and regulations. To him, 'die europäischen Länder sind heute geistig und wirtschaftig noch nicht ganz reif für den wechselweisen Austausch der elektrischen Energie'.⁴⁰ Both, however, underlined the fact that international exchange was taking place. But without legislation, larger exchanges could take place resulting in a more rational utilisation of resources.⁴¹

Without exception, all papers in the session argued for a *laissez-faire* regime for international electricity transmission. This was underlined in the General Report on this session by Professor Landry. 'In spite of all advantages which national interconnection brings with it', he wrote, 'there will be in certain countries either a periodical or permanent surplus or shortage of energy'.⁴² In light of the examples named by Haas and Génissieu, Landry valued that international connections 'can never have any but a useful and beneficial effect from all point of view'.⁴³

PROMOTING THE IDEA OF A EUROPEAN GRID

Back to the European network. The first proposal for a European-wide electricity network was made several months before Briand's speech, in May 1929. George Viel, the director of *Compagnie électrique de la Loire et du Centre*, made a proposal for a European 400 kV network at a reunion of the *Groupe du Sud-Est de la Société française des Electriciens*.⁴⁴ In essence, his study represents a technical paper on the potential of 400 kV technology. The exploitation of distant hydroelectric resources in France, the United States, or Europe, would be difficult without a higher transmission voltage, thus argued Viel. To be able to exchange electricity on a seasonal basis with neighbours, and to provide emergency assistance, France should consider the use of

⁴⁰ Robert Haas, 'Austausch Elektrischer Energie zwischen verschiedenen Ländern', in *Transactions of the World Power Conference, Basle sectional meeting 1926, vol.1* (Basle: E. Birkhäuser & Cie., 1926), pp.987-999, there p.987. The English translation reads as: "the European countries today are mentally and economically not yet completely ripe for the mutual exchange of the electricity."

⁴¹ A point also made by H. Niesz, 'L'échange d'énergie électrique entre pays, au point de vue économique et technique', in *Transactions of the World Power Conference, Basle, Sectional meeting 1926, vol.1* (Basle: Birkhäuser & Cie, 1926), pp.1025-1063, p.1049.

⁴² Professor Landry, 'Exchange of electrical energy between countries. General report on Section B', in *Transactions of the World Power Conference, Basle sectional meeting 1926, vol.1* (Basle: E. Birkhäuser & Cie., 1926), pp.1112-1124, p.1116.

⁴³ Landry, 'Exchange', p.1117.

⁴⁴ His paper would be published as: Georges Viel, "Étude d'un réseau à 400.000 volts", in: *Revue générale de l'électricité*, November, (1930), pp.729-744. Viel was also the acting president of the *Groupe du Sud-Est*.

400 kV lines. At such a tension, electric current could be transmitted over 1.000 km without a loss of tension. Seasonal exchange with countries adjacent to the Hexagon would result in saving massive amounts of precious coal. Only in the latter part of his paper, Viel contemplated on the possibilities of 400 kV on the European mainland, enabling a better balance between generation and consumption. Due to the longitudinal time differences, peak loads could be flattened.

Viel did not explicate what inspired him to contemplate on a network on a European scale. Still, in retrospect, we can cautiously assume that Louis Loucheur's ideas were of influence on Viel. The *Compagnie électrique*, Viel's employer, belonged to the *Société Giros et Loucheur*, partly owned by Louis Loucheur.⁴⁵ Loucheur, active in both politics and industry, envisioned an economically unified Europe, based on industrial cooperation.⁴⁶ To Loucheur such a 'Europe des producteurs' had two main advantages.⁴⁷ First, it enabled processes of rationalisation beyond the scope of a single country, encompassing the whole of Europe. Second, international agreements could help transform the current climate of custom barriers, and restore pre-war purchase power.⁴⁸ At the 1927 International Economic Conference it was Loucheur who plead for constituting an electricity cartel, among many other cartels being discussed, based on German-Franco collaboration.⁴⁹

Viel's theoretical essay was obviously not brought in practice. But he had set a trend. Almost precisely one year later, Oskar Oliven unfolded a similar plan at the World Power Conference in Berlin.⁵⁰ Oliven, the Director General of the *Gesellschaft für Elektrische Unternehmungen* (GESFÜREL), reminded his audience how electricity

⁴⁵ Claire Seyeux, 'Gestion du personnel: La réponse de Loire et Centre 1912-1932', in Dominique Barjot, Henri Morsel, Sophie Coeuré, and Coraline Clément, eds., *Stratégies, gestion, management: les compagnies électriques et leurs patrons, 1895-1945: Actes du 12e colloque de l'Association pour l'histoire de l'électricité en France les 3, 4 et 5 février 1999* (Paris: Fondation Electricité de France, 2001), pp.377-392, pp.378-381.

⁴⁶ Veronique Pradier, 'L'Europe de Louis Loucheur: Le projet d'un homme d'affaires en politique', in: *Études et documents*, V, (1993), pp.293-306, there p.295. Also see Bussière, 'L'Organisation économique', there p.304.

⁴⁷ The term is from Bussière, *La France*

⁴⁸ Pradier, 'L'Europe de Louis Loucheur', p.295, and Théry, *Construire l'Europe*, pp.65-66.

⁴⁹ René Brion, 'Le rôle de la Sofina', in Monique Trédé-Boulmer, ed., *Le financement de l'industrie électrique, 1880-1980* (Paris: Association pour l'histoire de l'électricité en France, 1994), pp.215-232, there p.226.

⁵⁰ Oskar Oliven, "Europas Großkraftlinien. Vorschlag eines europäischen Höchstspannungsnetzes", in: *Zeitschrift des Vereines Deutscher Ingenieure*, 74, 25, (1930), pp.875-879. Oliven's contribution can also be found in the proceedings of the 1930 Berlin WPC. It was also published as a separate booklet, in French, German, and English.

supply grew from a local to regional service. With the use of 200 kV and over, Oliven argued,

*"we should not use the locally limited economic factors as a basis for the supply and exchange of power beyond the boundaries of adjacent countries, but we must consider a general plan for the whole of the Continent, the realisation of which will be a self-evident fact for the coming generations".*⁵¹

Personal and political motives often raised barriers to otherwise economic and technological justified interconnections between local systems. For a continental system, Oliven suspected not much difference. But once these hindrances were superseded, not even technological limitations prevented a European network – Oliven saw 400 kV as commercially feasible. The limit of 1.000 km would permit the operation of several large power blocks. Oliven envisioned a grid of five main lines. Three north-south lines: from Norway to Rome, from Calais to Lisbon, and from Warsaw into Yugoslavia. These were complemented by two east-west axis: from Paris to Katowice, and from Rostov to Lyon. Together they combined a tight coupling between areas with hydro and coal-fired power stations on the one hand, and the large centres of consumption on the other.

Crucially, however, Oliven saw his grand vision not to be completed before the coming generations.⁵² The complexity of the matter had prevented him to prevent a finished plan. He also recognised increased collaboration between adjacent countries, where interconnections were built between national systems ‘which are now everywhere being built or projected’. To Oliven this represented ‘a very good interim solution for the period until the time when the difficulties standing in the way of a common European high voltage system are removed by international agreements’.⁵³ To him, the first step towards a rational electricity supply in Europe was the creation of a European super power network, which should be created within the scope ‘of a very large organisation’.⁵⁴ Although Oliven did not specify one organisation, he urged scientists, politicians and engineers at the conference to use their influence with their respective governments.

⁵¹ Oliven, "European super power lines. Proposal for a European super power system", 2nd World Power Conference, Berlin 1930, General Address, p.1.

⁵² *Ibidem*, p.1.

⁵³ *Ibidem*, p.6.

⁵⁴ *Ibidem*, p.10.

Oliven's last remark resonated with ideas displayed by Dannie Heineman. Heineman, and German-trained electrical engineer from American decent, was administrator of the Brussels-based *Société Financière de Transport et d'Entreprises Industrielles* (SOFINA), which was one of the largest *Unternehmensgeschäfte* in the 1920s and 1930s. He earlier advocated to take up the concept of an electrified Europe as object of a general study, in his preface to Francis Delaisi's *Les deux Europes*.⁵⁵ Delaisi saw a paradox in the existence of 'two Europes'; a horse-power-Europe (*Europe A*) and horse-drawn-Europe (*Europe B*).⁵⁶ In Europe A, the development of mechanised industry, with the steam engine as key technology, went accompanied with a new entrepreneurial bourgeoisie broke the political power of old aristocratic elites. 'Europe B, characterised by the use of animal power rather steam engines, and a *latifundia* subsistence, not only lacked this state of development, but also democratisation.'⁵⁷ Heineman saw two fundamental problems; a market crisis in Europe A leading to unemployment, and an agricultural crisis in Europe B.⁵⁸ He therefore stressed electricity's important role as a means to alleviate the industrial and agricultural crises in both Europe A and B, as well as divergence between the two. Underlining this view, Heineman in September 1930 voiced a similar opinion, during UNIPEDE's third congress. There Dannie Heineman stressed that an international entente or cartel between electricity producers and distributors was needed to establish a comprehensive economic plan for the electrification of Europe. To him, that would be 'la grande révolution de demain'.⁵⁹

Heineman did not only have message related to that of Oliven, there was also a personal link. Not only did the two studied together, since 1922 Heineman's SOFINA

⁵⁵ Heineman, 'Préface' in: Francis Delaisi, *Les deux Europes* (Paris: Payot, 1929), p.18-19. Francis Delaisi (1873-1947) was a French left-wing journalist, close to labour union *Confédération Générale de Travail* (CGT, 1895). After WWI he started to publish on international economy and politics after WWI.⁵⁵ For him, a fundamental paradox existed between the *homo economicus* and the *homo politicus*. Whereas the first acted internationally, the latter thought in national terms.⁵⁵ He judged the subjection of economic policy to national political interests as paradoxical, as it ran counter to existing economic interdependencies between European countries. See Michèle Pasture, 'Francis Delaisi et l'Europe, 1925-1929-1931 (extraits)', in Michel Dumoulin and Michel Stelandre, eds., *L'idée européenne dans l'entre-deux-guerres* (Louvain-la-Neuve: Academia, 1992), pp.43-49.

⁵⁶ This was the theme of Delaisi's influential *Les deux Europes*. The dividing line ran across Danzig, Cracow, Budapest, Florence, Barcelona, and Bilbao. Delaisi, *Les deux Europes*, p.50.

⁵⁷ Delaisi, *Les deux Europes*, p.49.

⁵⁸ Heineman, 'Préface', in: Delaisi, *Les deux Europes*, pp.11-12.

⁵⁹ 'Discours de D. Heineman', in: *Congrès international de l'UNIPEDE à Bruxelles, 1930, Compte rendu*. Cited in: Brion, 'Le rôle', there p.228, n.31. This event is also mentioned in Liane Ranieri, *Dannie Heineman, patron de la SOFINA: Un destin singulier, 1872-1962* (Brussels: Éditions Racine, 2005), pp.181-182.

owned a quarter of the shares of Oliven's enterprise GESFÜREL.⁶⁰ Thus, the two men certainly knew of each other's lecture. Heineman, an American-born, German-trained engineer of German-Jewish parents, was a longtime friend and business associate of Oskar Oliven.⁶¹ Not only did the two studied together, since 1922 Heineman's SOFINA owned a quarter of the shares of Oliven's enterprise GESFÜREL.⁶² Thus, the two men certainly knew of each other's lecture. Like Viel, Heineman also knew Loucheur. Together with the him, he had set up a consortium for a traction system in Constantinople in 1911.⁶³ In 1927 Heineman, like Loucheur, had argued for an international cartel of electricity producers and distributors. According to him, only international collaboration enabled a technical and economic rational exploitation of natural resources.⁶⁴ Taken together, these visions about Europe and electricity combined encompassed both an economic mix as well as an idealistic mix. Whereas Oliven stressed the rationalising effects of connecting consumption and production centres, and the improved load factor, Heineman's plan hoped to raise Europe out its industrial and agricultural depressions.

Heineman's ideas would not remain confined to engineering circles, however. By 1929, Heineman was well-entrenched within the European movement. He was a member of Count Coudenhove-Kalergi's *PanEuropa Union*, which included Briand and Loucheur, and involved in setting up an Economic Office for the PanEuropa Union.⁶⁵ Towards the end of 1930, Heineman gave several lectures in German and French entitled 'Sketches of a new Europe', in which he resonated Delaisi's and his own ideas from *Les deux Europes*.⁶⁶ This lecture, eventually published in three

⁶⁰ Belgium State Archives (hereafter BSA), collection SOFINA, Box 26 – File 5663 Gesfurel. Contrat de collaboration 1922. Oliven was already involved with SOFINA as representative on the management board since at least 1912.

⁶¹ Oliven and Heineman were both enrolled in university. Oliven sat with Heineman on several boards of electricity companies owned by SOFINA.

⁶² BSA, collection SOFINA, Box 26 – File 5663 Gesfurel. Contrat de collaboration 1922. Oliven was already involved with SOFINA as representative on the management board since at least 1912.

⁶³ Ranieri, *Dannie Heineman*, pp.68-73.

⁶⁴ D. N. Heineman, "Internationale Elektrizitätswirtschaft", in: *Wirtschaftshefte der Frankfurter Zeitung*, 2, (1927), p.26.

⁶⁵ The Economic Office would be housed in SOFINA's office in Brussels. Ranieri, *Dannie Heineman*, p.327.

⁶⁶ Dannie Heineman, *Outline of a New Europe* (Brussels: Vromant, 1930). His lecture shows all elements of the typical European project of the Interbellum: Heineman hoped to tackle the economic and financial troubles of his time— heavily inspired by the America experience —, and give 'the vision of an engineer'⁶⁶, with technological integration reinforces the political authority. According to Heineman three crucial elements were needed for forging a 'United States of Europe'. Firstly, a financial organism comparable to the US Federal System of Banks. Heineman thought that the Bank for International Settlements (BIS, 1930) would be a good starting point.⁶⁶ Second, an administrative

languages and two Europeanist journals, made both Heineman and his ideas more widely known – including his stress on the potential role of electricity.⁶⁷ Paul Hymans (1865-1941), Belgian minister of foreign affairs, clearly was inspired by Heineman's lecture.⁶⁸ In early 1931, it was sent around the Belgian diplomatic service in Europe by Belgian.⁶⁹ Likely, although not certain, Hymans also knew about Heineman's suggestion to initiate a study into the electrification of Europe, made in the 1929 preface to Delaisi's work. In any case, starting in January 1930, Belgian embassies and consulates in Europe started to send information about electricity laws of their respective host countries to Hymans' Brussels ministry.⁷⁰ In due time, the Belgian foreign ministry would take up Oliven's suggestion to have bring such a study within the scope of a large organization; the League of Nations.

THE PLAN WITHIN THE GENEVA MACHINERY

In 1931 the CEEU decided that the question should be studied preliminarily by the Committee for Communications and Transit (CCT), a technical committee of the LoN. The Secretariat was invited to prepare documentation on national legislations as well as international agreements in place between European countries relative to the exchange of electricity. The President of the CEEU eventually decided to constitute a new separate body to study this question in depth, after consulting the president of CCT and after having received complementary information from the Belgians.⁷¹ Thus

organism was needed, similar to the Interstate Commerce Commission. Thirdly, means of transport and communications had to expand between the European states, enabling a more optimal mode of trade.

⁶⁷ It was issued in an English, German and French version. In 1930 it was published as Dannie Heineman, "Esquisse d'une nouvelle Europe", in: *l'Européen*, January 7, (1931), pp.1-7. One year later it was again printed; Dannie Heineman, "Das Wirtschaftliche Gleichgewicht Europas", in: *Panuropa*, 6, 2, (1930), pp.48-56.

⁶⁸ Paul Hymans (1865-1941), studied law in Brussels, and acted as minister of foreign affairs in four Interwar cabinets (1918-1920, 1924-1925, 1927- 1934, and 1935-1935). He was minister of economic affairs during the last two years of WWI, and represented Belgium at the Paris Peace Conference. He was the first chairman of the General Assembly of the League of Nations in 1920.

⁶⁹ Diplomatic Archive of Belgium (Diplobel), Collection Hymans, #11440 I, letter dated January 19, 1931. Hymans introduced Heineman as 'a friend from business'. Paul Hymans (1865-1941), studied law in Brussels, and acted as minister of foreign affairs in four Interwar cabinets (1918-1920, 1924-1925, 1927- 1934, and 1935-1935). He was minister of economic affairs during the last two years of WWI, and represented Belgium at the Paris Peace Conference. He was the first chairman of the General Assembly of the League of Nations in 1920.

⁷⁰ Diplobel, File 4643 II, Sub-folder: 'Transport - Transit Energie électrique 1929-1933', dossier "Documentation sur de la législation et la réglementation concernant l'importation et l'exportation et le transit d'énergie électrique dans divers pays". It included letters from ambassadors from Sweden, Greece, France, Latvia, Yugoslavia, Hungary, and Luxembourg.

⁷¹ LoN Archive, Box R2572, 9E/29306/26461: Transmission and Transit of Electric Energy – Correspondence with the government of Belgium. Letter of Secretary-General of the CCT to the

a permanent Committee for Electric Questions under CEEU auspices was to be created in March 1932. It collected information concerning the political and administrative regime of electrical energy, the techniques used in the production plants, the electric energy and the network and their according mode of exploitation. Another major task was comparing the various preliminary studies – like Oliven’s – on the realisation of a European network so far. The results of this inquiry will permit a study on a European grid with a perfect knowledge of affairs. The role of the League of Nations should be to enable the establish international lines according to design juridical studies constituting part of the general organisational programme of the production and transport of electrical energy in Europe. These lines have to be established under a political and administrative unified regime with identical characteristics and exploited under similar modalities. Once that work is terminated, the Commission will have to elaborate the international necessary conventions and to precise more adequate more adequate to assure the gradual realisation and the exploitation of a European network.⁷²

In any case, the whole process caught the interest of the electro-technical community. The CCT had previously tried to adopt general conventions on international electricity transmission, albeit unsuccessful. Then, the community hardly showed any interest. Now, the situation was different. President of the WPC Dunlop wrote Robert Haas to ask the texts of the Belgian proposal, and offered his help to the Secretariat that is preparing a document concerning the international agreements in existence between European countries. As immediate assistance, he sent copies of Oliven's WPC speech, and referred to a book on national legislations.⁷³ On the 16th of February 1932 the president of UNIPEDE, Marcel Ulrich, requesting information. The industrial groups within UNIPEDE were very interested in the project of creating a European network for the transport of electrical energy, as they could possibly be called upon for the realisation and operation.⁷⁴ In addition, UNIPEDE wanted to know whether the temporary committee that was foreseen for the study of the project of Oliven was already established, and if so, which were the members.⁷⁵

Belgium Minister of Foreign affairs, 27 June 1931.

⁷² LoN Archive, Box R2572, 9E/29306/26461, 'Note'.

⁷³ LoN Archive, Box R2572, 9E/11978/1668 - Electric questions - Correspondence with the World Power Conference, Letter from Dunlop to R. Haas, dated 16th of July 1931.

⁷⁴ LoN Archive, Box R2572, 9E/1668/1668, Paris, 16 February 1932, President UNIPEDE to Stoppani.

⁷⁵ LoN Archive, Box R2572, 9E/1668/1668, Letter of R.A. Schmidt to Robert Haas, Lausanne, 7

As a side note, Marcel Ulrich, the president of UNIPEDE, was an active promoter of the European grid idea within Europeanists' circles. In 1932 and 1933 he published various pieces in *l'Européen* updating the readers on the headway of the project.⁷⁶

In parallel with the Belgian initiative, another similar proposal came from the International Labour Office (ILO, 1919), an associate organisation of the LoN in Geneva. Its director, and fervent Europeanist, Albert Thomas envisioned a wide range of European public works.⁷⁷ According to him the construction of large European public works – infrastructures like a motorway, a railway system, and an electricity grid – would be an apt solution to the problems Europe was facing. For several reasons. First, it would bring along a lot of employment in a time of layoffs and high unemployment. Second, it would offer Eastern Europe a way towards industrialization. Thirdly, the increase and improvements of infrastructures would lead to more mobility and market formation in that part of Europe. The connections with Western Europe would better their competitiveness. It was also hoped to “induce investors to put out money which at present time they are keeping hidden in their stockings”.⁷⁸ A last reason for Thomas was to create "l'un des éléments de construction d'une Europe nouvelle".⁷⁹

It was therefore not surprising that one of Thomas' envisioned measures to improve employment situation in Europe encompassed European networks. In a report to the CEEU in 1931, unfolded his plan to take advantage of national projects for public works. To alleviate unemployment, many countries sought a solution in the erection of public works to the benefit of society while providing jobs. Thomas wanted to coordinate these national projects into a European scheme. This would have a two-

December 1932.

⁷⁶ See for example: Marcel Ulrich, "Un projet de réseau européen. Le transport de l'énergie électrique", in: *l'Européen*, 25, (1932)).

⁷⁷ For more on Albert Thomas' life and visions of Europe see: Denis Guérin, *Albert Thomas au BIT, 1920-1932: De l'internationalisme à l'Europe* (Institut européen de l'Université de Genève, 1996); Martin Fine, "Albert Thomas: A reformer's vision of modernization, 1914-'32", in: *Journal of contemporary history*, 12, 3, (1977), pp.545-564 ; and Reberieux.Madeleine and Patrick Fridenson, "Albert Thomas, pivot du réformisme français", in: *Le mouvement social: bulletin trimestriel de l'Institut Français d'Histoire Sociale*, 87, (1974), pp.85-96.

⁷⁸ Archives of the International Labour Office (hereafter Archive ILO), Geneva, Cabinet Albert Thomas (CAT) 6B-7-3 - Questions économiques; monétaires et financières. Grand travaux publics nationaux et internationaux. Quelques plans de grands travaux publics - super-réseaux électriques Européens. November 1928 - May 1932. Letter to Hon. R.H. Brand, Messrs. Lazard Bros, & Co Ltd, London, 30 May 1931.

⁷⁹ Archive ILO, CAT 11A/2/3 - Travaux public. II. Production et transport d'énergie, 3, Banque générale pour l'industrie électrique, December 14, 1931, "Réseaux internationaux", Conference held at ILO, December 12, 1931, p.2.

fold function: it would be of use to the country in which the work is carried out, but would benefit other countries as well, also through the orders of equipment and material.⁸⁰ At the same time, it “would thus develop that spirit of collaboration, that European spirit which is the object of the Commission of Enquiry for European Union to foster”.⁸¹ Thomas mentioned three examples: a great international road system⁸², a system of navigable waterways, and lastly an international electricity transmission system. Stressing the importance of the Belgian memorandum, Thomas thought a transmission system would help “Europe with a unified economic organization”, and also would led to order for material in various countries.⁸³ To fulfil this vision, Thomas got the support Georges Lemaître, the administrator of the *Banque Générale pour l'Industrie Électrique*.⁸⁴ He also found the support of Heineman, Marcel Ulrich, Ernest Mercier, and Henri Cahen.⁸⁵

THE DEMISE OF THE PROJECT

The project for a European HV network never left the phase of documentation and planning. In December 1931 the idea of 400 kV network suffered a serious blow. Lemaître of the *Banque Générale* dismissed the possibility of using such technology, and was backed by the French engineers.⁸⁶ He therefore proposed to Henri Cahen and Dannie Heineman to study the interconnection of the various existing – and emerging – networks at 220 kV as part of the LoN scheme for international public works.⁸⁷ The international public work programme was finally rejected on at the *International Conference on Monetary and Economic Questions* in 1933, not in the least since it did not have America’s blessing – the most important creditor at the time. US representative Paul Warberg answered inquiries to the plan by Japanese and Poles that

⁸⁰ LoN publication, ‘Unemployment. Proposals of the International Labour Organisation’, C.275.M.127.1931.VII [C.E.U.E.23.], Annex 14, pp.114-115. The annex explicitly mentions that the proposals to combat unemployment were “made on the Director’s responsibility”, thus Albert Thomas.

⁸¹ LoN publication, ‘Unemployment’, p.115.

⁸² The history of Thomas’ efforts for the road network has been disclosed in: Frank Schipper, ‘The drive for peace? Road planning and the European project during the Interbellum’, TIE Working document no. 12, Paper presented at the SHOT 2005 Conference, Minneapolis, USA, November 3-6, 2005.

⁸³ LoN publication, ‘Unemployment’, p.115.

⁸⁴ Guérin, *Albert Thomas*, p.73.

⁸⁵ Mercier and Cahen were prominent French engineers. The latter also published in a Europeanist journal on the project. See: Henri Cahen, “Une union européenne électrique”, in: *l'Europe Nouvelle*, 14, 81, (1931), pp.276-278.

⁸⁶ ILO, CAT 11A/2/2, “Reseaux internationaux”.

⁸⁷ ILO, CAT 6B-7-3, Letters to Cahen and Heineman, December 29, 1931.

the USA ‘would oppose without any ambiguity a proposal that we finance somebody else’s programme’.⁸⁸ Albert Thomas would not live to see his plan fail. He died in May 1932.

The CEEU also lost its momentum, not in the least because its inspirer, Aristide Briand, died two month before Thomas. For the electricity proposal, it received an open ending in December 1933 as it was “considered that the present situation did not render it possible to anticipate in the near future either the institution of a more liberal regime for the exchange of electric power or the constitution of a European electric system”. It was however decided to keep the documentation up to date, pending a more favourable general economic situation would permit another look at the proposal “with some prospects of success”.⁸⁹ The economic crisis did not permit the prioritisation of such a large and risky undertaking. Added to that, the CEEU seemed to have lost faith in commonly constructed and operated network. It was optimistic on the establishment of a more liberal exchange regime either, pointing to the development of electricity systems within the national framework:

*“The tendency of present developments with regards to the utilisation of electric power thus seems to be in the direction of local or national solutions.”*⁹⁰

Underlining the national importance of electricity systems and domestic interests, were the responses in Belgium to the plan its governments had proposed in Geneva. The Belgian *Unions des Exploitations Electriques en Belgique* wrote the Minister of Public Works that such a plan “is by no means interesting for our country”.⁹¹ But a domestic consensus hardly existed. The *Comité Central Industriel* had objections – related to national defense – to importing electricity from abroad, but saw the advantages in terms of export possibilities. If the Oliven project would be executed it would be “essential to take care that it is not carried out by other apart from Belgian

⁸⁸ Charles P. Kindleberger (ed.), *The world in depression, 1929-1939* (London: Allen Lane, 1973), p.210.

⁸⁹ LoN Library, Advisory and Technical Committee for Communications and Transit. Records of the work of the Eighteenth session. Held at Geneva from November 29th to December 1st, 1933, Point XXVIII - Transport and Transit of Electric Power, and Regime of the International Exchange of Electric Power in Europe, C.98.M.33.1934.VIII, p.22.

⁹⁰ LoN Library, Annex 22 (C.C.T.566] - Memorandum of the Secretary-General of the Committee on Transport and Transit of Electric Power and the Regime of International Exchange of Electric Power in Europe. Geneva, November 2nd, 1933, C.98.M.33.1934.VIII, p.97.

⁹¹ Diplobel, 4643 II 1932-1939, Sub-folder: 'Transport - Transit Energie électrique 1929-1933', letter Director-General and President of *Unions des Exploitations Electriques en Belgique* to Van Caenegem, January 19th, 1932.

interests”.⁹² But the association of Belgian manufacturers had objections to such a view, and predicted nothing less than the “death” of Belgian electric heavy industry.⁹³ The pros and cons of the project were thus judged from a national perspective. The economic crisis only provided the final punch by emphasising national priorities.

RETROSPECT

The new authorities in Germany – who left the League in 1933 – tried to enforce a similar scheme to Oliven’s 1930 plan to serve the Nazi war economy. But to no avail. Nevertheless, Oskar Oliven, being Jewish, fled from Germany to Zürich and following the aryansisation of GESFÜREL in 1934. His plan for a European HV electricity system and that of other, despite all support from the European movement, was a mirage, and not able to help produce a durable peace. The Nazi variant did not succeed in producing a successful and durable war, either.

⁹² Diplobel, 4643 II 1932-1939, Sub-folder: 'Transport', Note: "Opinion des Unions des Centrales sur la demande du Comité Central Industriel relative aux interconnexions internationales dans le domaine de l'électricité", January 13th, 1931.

⁹³ Diplobel, 4643 II 1932-1939, Sub-folder: 'Transport', letter from the Association des Constructeurs de Matériel Electrique de Belgique, March 4th, 1932. They wrote: « L'avis général de nos constructeurs est que la conséquence de cette politique entrainerait la mort de notre grosse industrie électrique[...] ».