

EUROPEAN ATOMIC ENERGY SOCIETY EAES

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HISTORY

The EAES and its origins by late Bertrand Goldschmidt
Executive Vice-President 1955-1958

There is a French saying "Les peuples heureux n'ont pas d'histoire" to which I would be tempted to add "mais ils ont une préhistoire". This is the case of our Society with its happy and trouble-free past. My talk will be mainly concerned with the review of the important events, now long time forgotten, which led to its foundation and some personal recollections of its first years of existence.

Our society was conceived, at the Institute of Norwegian Engineering, in Oslo, in August 1953, the father was Norwegian, nobody knows who was the mother, but let us say that she could have been the reason of the father's virility : Norwegian heavy-water. The birth occurred just ten months later at the Royal Society in London.

These were the early days of the golden age of the nuclear saga : atomic energy was popular. People fascinated by its mysteries, were waiting impatiently for its benefits deemed to last for centuries thanks to the breeder reactors of the future. Radiation still kept some of its prewar aura linked to the success of radiotherapy in the fight against cancer. The disposal of the radioactive wastes was expected to be dealt with easily due to their relatively small volume. Each developed country had to have its Atomic Energy Commission even those which had no programme so to speak of. The completion of a country's first reactor was an event of national pride. By 1953, less than ten nations had reached that stage. Atomic scientists were envied and honored, and, believe it or not, the ecologists of those days, who were not yet green, had used in vain the argument that atomic energy was around the corner to save from flooding a lovely valley and a charming village in the Alps where a hydroelectric power plant was finally built.

Turning the back to its isolationist policy that had followed the Versailles Treaty in 1919, the United States had launched, as early as 1947, the Marshall plan, thus participating to the economical and industrial reconstruction of Western Europe and contributing to its future unification while the rejection of this plan by the Soviet Union and, willingly or not, by its neighbouring countries added to the materialization of the Iron Curtain.

But there was to be no Marshall plan for atomic energy, just the contrary. In November 1945, three months after the end of the war, there took place in Washington the first summit meeting uniquely devoted to the nuclear problem. The American, British and Canadian leaders, Truman, Attlee and Mackenzie King, agreed to pursue, until the establishment of a satisfactory international control, the war-time policy adopted by their predecessors in August 1943 at their Quebec Conference : no transfer of secret technological know-how to an outside party could take place without the consent of the three signatory countries. Furthermore they had established a common supply agency for the purchase of any uranium available in the world. This agency had in 1944 contracted, for a period of ten years, from the Belgian government in exile all the Congo uranium production, then by far the largest in the world, and had been allotted the large amounts of uranium compounds of Belgian origin found in Germany by the Allied troops at the end of the conflict. Furthermore, in 1946, the American Congress enacted the MacMahon Act which practically prevented any U.S. collaboration in the nuclear field with a foreign country.

Thus, the three main English speaking countries had adopted a monopolistic policy by putting a lock on the two indispensable ingredients of any atomic energy endeavour : technical know-how and uranium. Such a policy seemed to condemn the Western continental European countries, the most advanced in the field at the outburst of the war, to a kind of nuclear impotency.

It was not really to be, as France and The Netherlands had each a pre-war stock of around ten tons of uranium oxide of Belgian origin, well hidden during the occupation, respectively in Morocco and at the University of Leyden. These amounts quite insufficient for a graphite moderated pile, were plentiful for a heavy-water one. Fortunately, the countries party to the Quebec Agreement had not extended their uranium purchasing policy to heavy water, and the renewal, after the end of the war, by Norway of its production was to become an indispensable factor of an early European atomic rebirth.

Already the Norwegian pre-war production : hundred and eighty five kilogram's, then the worldwide stock, had played a major role : lent to France in early 1940, brought to Britain in June 1940 by Hans Halban and Lew Kowarski, Frederic Joliot's closest assistants, during their escape from France, it had been used by them in Cambridge in the convincing experiments that had led to the foundation, late in 1942, of the Anglo-Canadian project, with French participation and even initial direction, devoted to the natural-uranium heavy water system, located first in Montreal and later at Chalk River, where the first pile outside the United States, the Canadian zero energy pile became-operational in September 1945. It had been built under the responsibility of Kowarski who with three other French participants to the Anglo-Canadian project were to bring back to France in 1946 the know-how of heavy water reactors as well as that of uranium purification and plutonium extraction.

Respecting an undertaking made in 1940 by the Norsk Hydro, the firm responsible of the heavy water fabrication, the Norwegian government accepted, as early as September 1945, to give France an option on the initial five tons of its renewed production thus allowing the Commissariat à l'Energie Atomique (CEA), under the scientific leadership of Joliot, to complete its first pile as early as December 1948.

Norway had not only its heavy water, but it had as Chief scientist of its Defence Research Establishment a dynamic astrophysicist Gunnar Randers, who turned out to be the only person who had the audacity to convince his government to allow him to undertake the building of an atomic reactor without knowing, before an advanced stage of the construction, if, how or when he would get the necessary uranium to fuel it.

Having not found any suitable amounts of uranium ore in Norway, then judged, in early 1950, the French condition for the supply of pure uranium oxide rods as too exacting, Randers turned towards the Dutch and agreed with them on a common project, obtained from the British the transformation of the Dutch uranium oxide in pure metal rods, he finally managed, in July 1951, to start at Kjeller near Oslo, his reactor under the aegis of a Dutch-Norwegian Establishment for Nuclear Energy (JENER) the first joint European nuclear venture. (CERN, the first joint European scientific laboratory devoted to high energy physics, was only to be decided in 1952 the following year).

Norwegian heavy water was also going to moderate the first Swedish atomic pile completed underground in Stockholm in 1954. It was fuelled with the uranium extracted from national shale's and, this time, transformed in pure metal rods by France.

Two years after the completion of the Dutch Norwegian pile, JENER, convened at Kjeller and Oslo, under the impulsion of Randers, from August 11 to August 13, the first open nuclear conference ever to take place. Limited to the field of heavy water reactors, it was a great success, having attracted scientists and engineers from all over the world and from eighteen countries (Argentina, Brazil, Canada, India, Israel and twelve European ones including Yugoslavia). We have the pleasure of having with us today Jacob Goedkoop who was not only present at the conference but also was one of the two editors of its proceedings.

It was a purely scientific conference but not quite devoid of a political undertone, as it was planned as a step towards breaking the scientific barrier and trying to bring the Quebec Agreement signatories to undertake a substantial declassification.

Little did the participants to the conference know that the second day of their three days meeting a worldwide shaking event had taken place in secret at some thousand miles away that, considerably more than their gallant efforts, would lead to the abandon of the secrecy policy : the explosion of the first Russian hydrogen bomb, proof of the inefficiency of that policy specially towards the country against which it was mainly directed. Again a summit meeting followed, this time in Bermuda, during which the two war-time associates, Eisenhower and Churchill, now respectively President and again Prime Minister, agreed to a complete change of attitude, worldwide announced a few days later on December 8th at the United Nations by Eisenhower in his famous Atoms for Peace speech.

This was followed in August 1954 by the amendment to the MacMahon Act which had prevented the U.S. to collaborate in this field with a foreign country, then in August 1955 by the worldwide raising of the secrecy curtains at the U.N. sponsored Geneva Conference and finally to the creation of the International Atomic Energy Agency in late 1957, practically in the same time as Euratom (of the six Common Market countries) and the European Nuclear Energy Agency (ENEA) of the larger organization for European Economic Cooperation (OEEC). These were to be the beginning of the years of euphoria of nuclear industrialization in the world which thirty three years later was to receive its up to date worst blow provoked again by an explosion also in Russia but this time of a reactor and accidental.

But let's go back to the 1953 JENER Conference. In his closing remarks, Randers proposed the creation of "some kind of loose organization" that one could call "an International Nuclear Energy Society" aiming at keeping and increasing the contacts between scientists and engineers working, all over the world, in the field of nuclear energy and power, collecting, publishing and circulating information, even perhaps publishing a Journal, possibly also dealing with the standardization of symbols and nomenclature. He suggested that future informal discussions on his proposal could take place between contact men, for instance one for each of the countries represented at the conference. He was seconded by Stevan Dedijer, the head of the VINCA Yugoslav atomic establishment, who underlined the accrued benefits that such an organization could bring to countries with modest means like his own. Finally a further discussion led to entrust the task to a more limited group of representatives from the two JENER countries, Britain and France.

In practice the shape of our future Society materialized in an exchange of a series of letters, end of 1953 and early 1954, between Randers and Sir John Cockcroft, Chief scientist of the British atomic establishment at Harwell, recent (1951) Nobel laureate, with whom Randers had worked during the war when, as a captain in the Norwegian army, he had participated in England, from 1942 to 1945, in the work on radar.

The quest of such a prestigious support for its future society was an excellent move by Randers if not as we will see, for the views he had for its statutes. Cockcroft who, in 1944, had replaced the French physicist Halban at the head of the Montreal Anglo-Canadian project, then still traumatized by the fact that it had been from the start deprived of any American assistance or collaboration following a December 1942 monopolistic decision taken by Roosevelt, against his closest ally, just after the start of the Fermi Chicago pile, decision non-proliferation oriented, that the repeated protests of Churchill managed to have substantially cancelled at their Quebec Conference. Therefore Cockcroft represented one of the three countries parry to the secrecy policy, the least fanatic in its application as Britain not only before but even after the conclusion of this conference had somewhat been treated as a poor relation by the U.S.A.

Randers, who favoured initially an International Scientific Society, with individual membership and possible affiliation to ICSU, the International Council of Scientific Unions, had to accept Cockcroft's proposal of a purely Western European affair, with Atomic Energy Commissions being the members.

A rather ambitious draft of the statutes by which a General Assembly would have taken place every three years to ensure that the Society received the necessary funds for its functioning was reduced at a preliminary meeting in London on March 30th 1954, to a much shorter text specifying that the members would cover current expenses incurred with their work in and for the Society, thus the Society having no funds of its own. This last fact was an absolute condition for British participation.

The two executive officers of the Society were to be the President of the Council and the Executive Vice-President, chairman of the Working Group, obviously initially Cockcroft and Randers, an added Vice-President with no function was included following, at the last minute, a Gallic prestige reaction of Pierre Guillaumat, the head of the CEA. I was to be the first "inactive" Vice-President.

The Society was formally established at the first Council meeting which took place at the Royal Society in London, on June 15, 1954, under Cockcroft's chairmanship. The founding members were the atomic organizations of Belgium, France, Italy, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom. The word "nuclear" in its title had been replaced by "atomic" to avoid any confusion with CERN which was founded in Geneva the 29 of September of the same year.

At the Society's first Working Group meeting, held also in London, a week after the Council, Randers suggested "Euratom" as its telegraphic address and never claimed any precedence when, some year and a half later the much more political and publicized organisation of the Six first Common Market countries took and kept the same name.

The next Working Group meetings took place, at two or three months interval, successively in Paris, Stockholm, Basel and again Paris in June 1955 under the chairmanship of Randers who had in the meantime been chosen by the Secretary General of the U.N. Dag Hammarskjöld to be his special adviser on atomic energy matters for the first U.N. sponsored Geneva Conference of August 1955. The European participation to this conference as well as the future International Atomic Energy Agency were to be major subjects of discussion and exchange of information at the first meetings of our Society.

During that first year of its existence five small symposia were arranged limited to about twenty participants from the member countries on the following subjects : Safety and siting problems of nuclear reactors (Harwell), Production of heavy water (Rome), Reactor calculation (Arnhem), Reactor electronics (Paris) and Reactor operation (Stockholm).

The second Council meeting took place in Brussels on December 21, 1954. The Special U.S. Ambassador Moorehead Patterson was invited to inform the participants on the development of the negotiations towards the future International Agency.

At that meeting Cockcroft asked me privately if the CEA would be interested to have British industry build for us in France a gaseous diffusion plant similar to the one just achieved at Capenhurst, as he knew that we had not yet embarked on the enrichment path.

Such an offer was part of the plans of his government to promote a large hard currency earning programme of nuclear exports in the new circumstances of the Atoms for Peace philosophy. Pierre Guillaumat having readily accepted, a meeting was fixed in London early February 1955, to work out the various aspects of the transaction.

I accompanied Guillaumat to this meeting, it only lasted ten minutes, as Sir Edwin Plowden and Cockcroft, the two heads of the recently created UK Atomic Energy Authority, after showing us briefly the detailed offer they had prepared, were shamefully obliged to tell us that it had been vetoed by the U.S. as contrary to the Quebec Agreement even though the technology was purely British. On his return to Paris, Guillaumat took, in reaction, the decision to render public, at the Geneva Conference, the solvent plutonium extraction process we were developing industrially, up to then a highly secretly guarded domain.

American industry was also trying to penetrate Europe, and, to our great surprise, Randers without consulting the members invited to the Paris June 1955 Working Group meeting representatives of two American firms involved in the nuclear field. It turned out to be a stormy reunion at the end of which Randers had to apologize and accept the unanimous decision that industrial representatives should not attend the Working Group meetings.

Two months later on August 17, the third Council meeting took place in Geneva during the successful secrecy curtain raising Conference. When point 3 of the agenda "Election of officers for 1955-1956" was reached, Cockcroft who chaired the meeting asked Randers and me to leave the room. We were called back ten minutes later and learned that our titles had been switched, I had become Executive and Randers "inactive" Vice-President. Then Cockcroft said "now comes the election of the President, I will leave the room " and stood up. A few seconds of surprised silence followed, broken by a general applause of all the participants, he sat down again and thanked. The society had ceased to be the Randers Society, and had become as it was often called during the next years the Cockcroft Society !

The clapping scenario having taken place again the following year, I was endowed by my colleagues the delicate task of explaining to Sir John that his presidency or mine were not for life and in 1957, it was decided that we would both retire from our chairmanships the following year. Followed two long terms Presidents Harry Brynielsson from Sweden for three years and Francis Perrin from the CEA for four years until the simpler present system of yearly rotation was to be adopted and retained.

Felice Ippolito, the active Secretary General of the Italian "Comitato" succeeded me, Jose Mario Otero, from Spain, being second Vice-President. By that time, Portugal and Denmark in 1955, then Germany and Spain in 1956, and finally Austria in 1958, had been unanimously invited to join the society, while despite Randers efforts, due to the initial part played by Dedijer at the JENER Conference, the case of Yugoslavia was regularly considered and postponed ! From 1958 to the early 80's the number of members stayed constant at 13, before starting on its near doubling increase up to the present situation.

The eleventh Council meeting at Palma de Majorca, in 1960, saw the repeat of the Vice-President switching act, this time between Ippolito and Otero. It was most awkward as after having been demoted without prior warning, Ippolito concluded the meeting in offering beautiful engraved silver cigarette boxes to John Dunworth from England, to Sigvard Eklund from Sweden - the future director general of the IAEA - and to me for our assiduous presence at the first twenty five meetings of the Working Group. Cockcroft who was leaving the Society was given a silver tray, while Perrin had independently received a negative present having earlier had his pants stolen on the beach.

We felt still more guilty when about a year later Ippolito was condemned to a severe prison sentence supposedly for misuse of the Comitato's funds, but in reality for his part in a fierce vendetta war between CEN, ENEL and private industry. He was to receive a presidential grace after three years of confinement. He then left the nuclear field to become senator.

In May 1956, he had efficiently organized the first enlarged conference at Monte Faito, a mountainous resort near Naples, and had entertained us in a charming way by lustily singing Napolitan arias at the end of the fifth Council meeting which took place on the boat to Capri.

The preceding meeting of the Council had also taken place in movement, in December 1955, on a bus between Windscale and Blackpool while fog and sleet had prevented us having the slightest glimpse of the beautiful lake district.

Thereafter the sites and dates of the Council meetings took account as much as possible of the most propitious season and were often located in exclusive hotels all over Europe, as North as Bodo near the polar circle, as South as the Algarve in Portugal, and as East as Heraklion in Crete.

When Germany joined the Society in 1956, the member was the Deutsche Atom Kommission and was represented by Werner Heisenberg, the Nobel prize winner, and Karl Wirtz. But arriving late in the evening to Madrid in April 1957, I was met at my hotel by my Dutch and Swedish colleagues, both indignant : they wanted to warn me in advance that, at the Working Group meeting I was to chair the next day, Germany was due not to be represented by a nuclear scientist but instead by a civil servant of the Ministry for Nuclear Energy and that, for the good of the society, I should sternly oppose it. When the meeting started, looking at the newcomer, I explained awkwardly that we were a group of scientists and that a representative of a Ministry was out of place ; the gentleman concerned who was getting redder and redder said that he was Doctor in Science, so I added that we were all nuclear specialists "But I am Director of the Reactor Division at the Ministry" was his reply. Shamefully, I was to retreat in disarray from this incident that I suspect had been triggered by Wirtz, unhappy not to have been sent to Madrid.

Finally the society got an official letter stating that the German member of the Society was the Ministry and would be represented usually by the Minister himself, Siegfried Balke and Dr. J. Pretsch, who kept no rancour against me and couldn't have been a nicer person. While Balke became a fan of the Society coming himself for many years to the Council meetings.

These long past incidents should not hide the fact that our Society had become very quickly a kind of relaxed club, with loose rules, far from the limelight and the medias, whose main aim was to create professional and personal links between all the different kinds of specialists (and even their wives at the council) involved in one way or another in the development of nuclear energy in their respective European countries.

If our Society had not been founded, before Euratom, the ENEA, and the IAEA, the political, financial, rivalry problems which marked the negotiations of their statutes and their early days would have been an added reason to invent a club like ours.

Very quickly, it turned out that out of the six domains spelled out in the statutes, only the first one -the promotion of seminars- would be treated by the Society, while circulation of reports, the standardization of nomenclature and symbols, the study of hazard and safety measures, the promotion of publications and even perhaps a journal, and the establishment of a centre of information on availability of materials and equipment were left to the more official Agencies. These five last domains were therefore eliminated from the statutes when a new version was adopted in 1994.

The running of the Society thus turned out to be mainly limited to the organization of both the enlarged symposia with invitations to specialists from countries not members, and the ordinary symposia which were always open to specialists of Euratom and ENEA. The numbers of the latter averaged eight during the first nine years of the Society's existence, then it slowed down considerably from 1964 on.

When I ceased participating to the meetings of our Society in 1980, twelve different Executive Vice-Presidents had succeeded each other, for the day to day running of the society. Twenty enlarged symposia or combined meetings had taken place as well as about hundred symposia. I had myself participated to thirty Council meetings out of thirty two and to sixty five Working Groups out of sixty eight, and, in all, _ had been more than two hundred days away from Paris and travelled about hundred and twenty thousand kilometres on EAES business.

Thanks to some of these meetings, the administrative managers, the budget specialists, the architects and the public relations agents of nuclear establishments met for the first time. In early June 1958 took place in Marcoule the first meeting on public relations ; its tenure unfortunately coincided with the troubled passage from the French fourth Republic to the fifth, and at the last minute afraid to be caught in a revolution, the British delegation decided to cancel its participation, a most unfortunate decision because they had just managed successfully to prevent any public reaction to the October 1957 Windscale reactor fire. I had to promise to have cars ready to take them from Marcoule to the Italian or Spanish borders in case of revolution, to convince them to come and enjoy a few days of sunny and finally very calm days under a returned De Gaulle. Political events dominated quite a few of our meetings, and we were at Lugano at a Council meeting when De Gaulle left for good the French political scene.

In May 1974, we met at a lovely hotel (former shooting lodge of a prince) , at Friedrichsruhe in Bade-Wurtemberg. I was enjoying my breakfast and a delicious local home made blackcurrent jam when Andre Giraud, the head of the CEA , my boss, arrived in the dining room , told me that the Indians had just exploded their first bomb and asked me to prepare immediately a congratulation telegram to Homi Sethna his Indian counterpart. I prepared quickly a first draft that he refused as not enthusiastic enough, so I prepared a warmer one with superlatives, phoned it to my deputy in Paris, who duly sent it to Bombay by telex (it was pre-fax and pre Email days). Two weeks later the congratulation telegram was published textually in all the Indian press. Over night, the network of good relations that I had laboriously built in twenty years between the CEA and our Foreign Office crumbled and, for the rest of my career, I was branded by my Quai d'Orsay colleagues as an inveterate proliferator (that I had perhaps been in a way). In any case, I have surely been today a word proliferator, taking too much of your time.

But you have given me a great pleasure in asking me to give this talk. Thank you so much for your invitation and your attention.

THE DISCUSSION THAT LED TO THE EUROPEAN ATOMIC ENERGY SOCIETY

A VERBATIM RECORD

J.A. Goedkoop, former Director of Research, Netherlands Energy Research Foundation, Petten

Explanatory note - The idea that would develop into the EAES was launched during the Kjeller Heavy Water Reactor Conference in 1953. This first international conference on nuclear energy was organized by the Joint Establishment for Nuclear Energy Research (JENER) at Kjeller, jointly financed and staffed by research councils in Norway and the Netherlands. After the conference had been announced it soon became clear that the meeting facilities at Kjeller would be insufficient. Therefore only a short opening session was held there on August 11, after which the participants visited JEEP, the Joint Establishment Experimental Pile, for many of them the first nuclear reactor they ever saw. Following that, the conference moved to the meeting hall of the Norwegian engineering society in Oslo. The last technical session, on a variety of physics subjects, was held there in the afternoon of August 13. It was followed by the discussion that led to the founding of the EAES on June 15 of the next year in London.

On the occasion of the 2000 Combined Meeting of the Society the record of this discussion has been reproduced from the Proceedings of the Kjeller Heavy Water Reactor Conference, JENER Publication No. 7, pages 229 to 231. The reader will note that the editors, the late Gudbrand Jenssen and I, tried to stay close to what had been transcribed from the magnetic tape recording. Since he may not know all the participants in the discussion, a few words about each of them: Gunnar Randers, astrophysicist by training, was the director of JENER. He had initiated work on nuclear energy in Norway. For Randers JENER, the Kjeller Conference and the EAES all were steps in a strategy aimed at a freer exchange of technical information; the next one would be his role in the preparation of the first UN Conference in Geneva in 1955, which led to large-scale declassification. His compatriot Odd Dahl was the designer and builder of JEEP. Setvan Deder was from the Institute for Research of Matter in Belgrade, John Y. Dunworth a senior physicist at the United Kingdom Atomic Energy Establishment at Harwell and Lew Kowarski, then with the French Commissariat à l'Énergie Atomique, one of the men who even before the outbreak of World War II had been trying to build a heavy water reactor.

J.A. Goedkoop, former Director of Research, Netherlands Energy Research Foundation, Petten

The session chairman then called upon Mr. RANDERS for some closing remarks he wanted to make.

Mr. RANDERS: The serious business of this meeting is drawing to a close and I think I would like to thank everybody who has contributed during these sessions here, both the short and the long contributors. I must say I have really admired the preciseness of all the speakers. I have very seldom seen a conference which ends formally sharp on the dot of the time that was planned for the ending, and most speakers seem to have been able to keep very well within that time and at the same time bringing us very much of interest.

We want to thank you all for that. You may have noticed perhaps that the words have been flowing faster and perhaps more easily to-day more than the previous days. This may come from the fact that we are warming up, but, personally, I think that perhaps it comes partly from the fact that the field of neutron physics is slightly more familiar ground to cover in a conference; we have more or less the tradition from many years of physics conferences - people know how to behave in a physics conference. No, I don't say that people didn't know how to behave in a nuclear energy conference but you might say there is no tradition in that field. We don't really know how in the future international meetings on nuclear energy, are going to turn out, and this brings me to the last point of the program. I am sorry to be the one who spoils the time table but it will not take very long.

I promised on the first day that we would come back to the question of what kind of contact one should try to obtain for the future among the people working in the field of nuclear energy. In the meantime, I have discussed it with some people here and I understand that others have discussed it a little, and as far as I can see, everybody seems to agree that we should perhaps try to take some kind of minimum measure to assure that at least we have an opportunity if we want to use it later for keeping contact and increasing contact with each other in the field of nuclear engineering and nuclear power. What we have been thinking of is that it would be useful to have some kind of loose organization, or you might not even call it an organization, but some kind of society on the line with many other societies, which would assist in taking care of a few problems that will arise in any case, for instance questions like standardization, the nomenclature in nuclear energy problems and standardization of symbols to be used. We have already a start at a quite varied mixture of different symbols meaning the same thing. This will be a very great help if in the very beginning of this work, it could all be settled. Also, there might be people who might think it would be a good idea to have some kind of publication in this field in the future. We do have NUCLEONICS in the United States. Maybe NUCLEONICS would be the right thing to build upon, maybe it would be the right thing to make a European NUCLEONICS. After all, it wouldn't hurt to have two of them. At least seems there is not in Europe any suitable place to publish to-day works in this field. You have the question of meetings like this. Until now people working in the field of nuclear energy have fallen between two chairs - they're not really working in the field which the normal meetings of the physical societies are concerned with and they're not really yet - or, you might say, they are not in the normal engineering field, so that it seems that it might be desirable to have meetings of this general type. They may develop in one direction or another but this doesn't seem to be an impossible starting point. Further, you have the problem which most of you here have run up against, the fact that you know that there are lots of information available which you cannot obtain because you don't know where to get them, you don't know how to get them. They may not even be published in a way that they are easily accessible if they are not secret in any way, so that the job of collecting, publishing, and circulating information in the field of nuclear energy could also be taken care of. Now, in order to achieve these, one might suggest to organize something which one might call an International Nuclear Energy Society.

This, of course, we are not in a position to do in five minutes this time. I have a feeling that it has to get started somehow and I'm just going to make a suggestion which does not really tie us up in any way, except in the way that we should agree here whether we want it or not. I think that this meeting could, if we want to, formally agree that such an International Nuclear Energy Society is a desirable thing, that this is a thing we want to try to organize and that this society should take care of the points I mentioned. They were standardization of symbols and notation, they were making perhaps a journal for publishing articles in this field, there was arranging of international and other meetings, and it was the collection and circulation of material. I think that this meeting in agreeing that such a society is desirable does not do anything that could in any way be criticized or resented, on the contrary, I think it would be a highly correct thing to do. That would be the first point which I formally suggest that we take up and agree on after those of you who would like to make comments have made your comments. The second point then has to do with the practical way of achieving this, and there I would suggest that each of the countries (I think we are probably nineteen countries here) that are present, sometime before this evening, when we meet again, find one of their members who is willing to act as a kind of a contact man in their country. This does not mean that this man is elected as an official representative of that country. It means that we have a man to whom letters could be written when one gets that far that further steps are planned so I would suggest as a second point that each delegation here picks out one contact man and that we get the names of those to-night at the dinner. Well, this is all I will say for the moment. I believe this could be a very useful thing that could help a lot the work quite a bit in very many countries and probably all over the world, and it could save us in some respects some difficulties that are sure to arise at a sooner or later time. I would be very glad to hear if anyone here has any positive or negative comments on this suggestion.

(There was applause. The discussion was from this point on led by Mr. RANDERS)

Mr. RANDERS: Of course I might say that I do not necessarily expect each delegation to get up and say "hurray" to state that they are for this. I expect that those who do not voice any objections really agree on the limited proposal which I proposed.

Mr. DEDIJER: I would like to say a few words about this. Mr. Weinberg spoke about the countries which invest hundreds of dollars per head per year in atomic energy, and most of the countries here invest tens of dollars a year per head. Now the country I come from invests just a few cents per head per year and one of the results of that is that we did not participate, or participate extremely modestly in the scientific and engineering part of this conference, but no country, I feel, can turn its back toward the future, particularly not atomic energy in the future - and our problem is exactly to find what we can do along this field.

Now, because of the small investments we make, we must be sure and choose the right direction and spend those few cents exactly on the spot where it's needed. That is one of the reasons we see very great value in this type of conference because we learn a great deal about what we could do in this field with the modest means at our disposal and in that sense I want to give full support to the proposal made by Prof. Randers and which I think rose up in many discussions which have been held before this conference and at the conference itself.

I think the limited scope which was proposed by Professor Randers on this stage is very good because we have the experience of the C.E.R.N., where I think a lot of work was achieved but was achieved going very slowly and thinking every step ahead. I would support this proposal that we have an unofficial society, nuclear energy society, but I think there's a little hole in the proposal, and that is that somebody should call this society, whatever it is, to get these people together, and I think that since our hosts - and I consider hosts, not only Norwegians, but also the Dutch who are taking part in JENER - since they took the initiative for this coincidence, I think it would be good if one representative of each would enter into a small committee to call this society for a future date. Since two never makes a good committee, I suggest that Professor Randers names another member so we will have a small committee of three which will be the initial committee to write letters and to exchange agreements and to call for a meeting when they feel it's necessary. Sorry I took a little longer time, but I thought I should express the viewpoint of my country, and there are quite a few like that here, I think, which are on a lower level than a great majority of the countries, I mean in investment and experience in this field.

(Applause)

Mr. RANDERS: Does anyone else want to say anything about this question? As I said before, the silence I take as agreeing so far as people have talked up to now. I think that Mr. Dedijer's proposal - of course, it is true, in principle it fills a hole, it is true: if there shall be one man in each country to receive a letter, there must be somebody to send this letter, and the idea is quite correct as Mr. Dedijer says that a small committee would have as a job simply to find out how to get about the first steps of formally organizing this society which would probably only mean making some very rough points on which the society probably should work and to distribute these and at a later time call a conference or by writing try to get an agreement among the interested nations about how this should be organized in detail. This little committee suggested by Mr. Dedijer should therefore not be considered as any official board or direction of this society which is not yet formed. It should be a little working group, you might say, which would do some of the rough work to begin with. I believe that it is perhaps immodest to accept the generous proposal of Mr. Dedijer. I think the complete proposal is a bit immodest because asking that I should appoint somebody, I don't think that is quite correct. I would be very happy to be a member of this small working group of three people and I would be very happy to have one Dutch representative there. The third representative, if I might myself make a suggestion, I would say that if you follow the same line of thought as Mr. Dedijer has started - he has taken the two small countries who are actually working with a pile for the moment, - then, you might say, going one step further, you get immediately to a slightly bigger country, namely France. And maybe as a suggestion, it would not be too far out of the way to suggest that France had one working member in this commission. One should not probably discuss too long who is a member because this commission is not a very important commission. It is simply to sit and do secretarial work, I would say, and if we get into the trouble of discussing who should be a member, we would get to the difficulties of finding that there ought to be representatives from different parts of the world which has not very much sense since we simply have to look at similar societies and see what of their functions we would put down on paper and propose should be used in this society.

I don't know if my proposal that the third representative should be a French scientist, if that is agreed to.

Mr. DAHL: Should I express my opinion as a party in the matter, since I am after all a Norwegian. I think a man from France should be very ideal, if we could get these three men, that is all right. But, then again, we should try to emphasize that this should not be inside or outside any given system and just to emphasize this openness that we are trying to get, I think that if Great Britain somehow could manage to have as a fourth member a man on this very preliminary planning committee or information committee assembly committee, whatever you call it, I think it would, in my opinion, suit the spirit of the future.

Mr. DUNWORTH: I am here speaking as a private individual rather, than as a representative of the U.K. I would like to suggest that as this is a democratic organization, that at the start of it, the working party, if any country does have some knowledge of atomic energy it should be enabled to volunteer a member to the working party if it wishes to do so strongly, and I would like to leave it myself with that proposal. I think obviously Professor Randers is taking the leading part in this, having made this announcement and having organized this first international conference and therefore if any person or any country decides to appoint a member to this working party, I would suggest that they get in touch with him.

Mr. RANDERS: I would myself like to agree very heartily with Dr. Dunworth. I think it is perhaps the best way of solving the problem. Before Dr. Dunworth spoke, I agreed with Mr. Dahl. Now this is usually my way of having it - I think it is quite true as Mr. Dahl said that, in order to emphasize that this is not any association which is of such a nature that there is any reason that Americans and English couldn't join without any difficulties for security or anything, then I think it would be a good idea to have definitely an Englishman or an American in there and the same with Canada, of course. Then we get into the complications in that we would then have to start selecting a large group here and I would say I think that Dr. Dunworth's suggestion was a very wise one. Obviously, it would be a great help for those working in this committee if the other countries were willing and liked positively to send a representative. My thought was that it was a bit ambitious perhaps to ask all these countries to send a man and use the money for sending a man and asking him to take the time for this in the beginning stages. But I would agree heartily with Dr. Dunworth. Those countries which are willing and want to do so, we would be very happy to see members from these countries in this working committee. And I would suggest, as I did, again that these countries contact me who are interested in having a member in this initial committee. In the meantime, I would then ask formally if this meeting will agree to the desirability of planning to organize the International Nuclear Energy Society.

(Applause)

Mr. RANDERS. Well, I think we can say that this has been approved by the meeting. Then, the second point, may I expect that as a first step each delegation will give me the name of one man who is willing to act as a temporary contact man.

Mr. KOWARSKI: I wanted only to remind that from my experience in C.E.R.N., working parties should be kept to a certain minimum of members. If they are not, they are no longer working parties. My own experience is that five is about the maximum practicable size. Again from my experience in CE.R.N., I can say that one sometimes manages to squeeze in six but this is already a compromise between efficiency and some other reasons. So, I would strongly advise, whatever is the number of participating countries in this preliminary committee, end up by having a subcommittee or executive having not more than five members

Mr. RANDERS: I think in practice there would probably be no great difficulty. As everybody knows, a letter usually is written by one man and the work is usually done by one, each type of work, and I think in practice it would come down to this fact that the main load of work would lie on two or three or four men, but that these other voluntary representatives from other countries will be kept well informed all the time, so well that they have the time to make proposals and make complaints if they see something going the way they do not like, so I think that we could keep Dr. Dunworth's proposal as a temporary measure anyway, and see how long it goes. Now since we'll be able to have our contact in the different countries, if we see that this doesn't work, it is always possible to get in contact with the different countries and get elected a smaller working group among this first larger one. Well, then I think I will not keep you sitting here longer.

(After having explained dinner arrangements for the evening, Mr. RANDERS closed the meeting)

EAES 2000 COMBINED MEETING LES SAINTES MARIES DE LA MER CARLO SALVETTI

First, I wish to express my thanks to the European Atomic Energy Society for their kind invitation to this Combined Meeting of its Council and Working Group, apologizing for my absence due to overcome family engagements. Special thanks to Mr Ludo Veuchelen, EAES Executive Vice-President, who invited me to recall personal experiences and facts within the EAES, possibly evolved in particular and meaningful events. I don't think I might add something new to what Bertrand Goldschmidt will sly on the 45 years history of the Society; and this for two simple reasons.

First, because Bertrand has pioneered the idea itself of the Society, together with few other outstanding pioneers of nuclear energy in Europe, in such a way that he may be considered the true Founder; but also because he has constantly followed and inspired its course during almost half a century.

For these reasons, not only Bertrand can be considered the "Mentor" of the Society, but he is so identified with it that I should say that Bertrand "IS" the Society. Surely you will enjoy of his cultural talent that makes him the most famous historian of Nuclear Energy.

Another reason why I think that my absence today is quite unimportant, is because I had just few and faraway contacts within this Society; last meeting was the "Combined meeting" in Villa Condulmer (Venice) nearly twenty years ago!

However I want to underline that the biggest events in the nuclear history always had a testimony in our Society's life.

How could I forget, for instance, the 11 of August 1955 Council Meeting, in Geneva, (its Chairman was Sir John Cockroft), while the first triumphal United Nations International Conference above peaceful uses of Atomic Energy was in progress?

And how could I forget that the announcement about the reached criticality of Calder Hall Station, the first European nuclear plant, was given just during the 1956 EAES Power Reactors Symposium, held in Monte Faito (Naples)?

So, the reminiscences of about half a century of nuclear history events, crowd and mingle together with our Society's life.

Among many memories, perhaps somebody doesn't know that at the beginning the Society was called EURATOM, afterwards this name was changed given to the European Community for Atomic Energy.

In fact, among my old papers, I found by chance. that in 1955 (while the Executive Vice-President was the Norwegian Gunnar Randers (co-founder himself) the EAES Cable Address was: EURATOM-OSLO. Surely Bertrand remembers this!

Last but not least, from the present program I learn that the aim of this meeting, besides a sight to the past, is also to give a sign to the future.

I know, from my personal experience, this is difficult and I fear to be not enough qualified... but I want to express just a short consideration, within any anticipation.

I refer to the Society's deed of partnership, as expressed bar the June 1954 Statute (luckily I found a copy of it among my papers).

The first article says: "the aim of the Society is to promote co-operation in nuclear energy research and engineering" while the third one establishes final: its members will be the European Countries which have nuclear programs and which are represented by National Agencies acknowledged as central organisers for nuclear energy research.

Incidentally, for its exclusive character, so selective and so confidential, EAES has been sometimes defined as "a secret Society Without secrets" and this denomination perhaps is not completely unjustified.

But, what to say for the future? In my personal opinion I think that the Society should keep a certain degree of confidentiality to allow, as in the past, a genuine and frank exchange of ideas and information but, overall, in order to avoid the glamour that since too many years is connected with open discussions on nuclear events.

I think also that its structure and the quality of its position shouldn't be changed even if today there are organizations where European government are directly and officially represented (for instance the Nuclear Energy Agency of the Organization for Economic Cooperation and Development; the European Community of Atomic Energy, the International Atomic Energy Agency, and so on).

Its composition gives to EAES an authority that is in the meantime the peculiarity that distinguishes it from other European non-governmental organizations like the European Nuclear Society that is an association of individuals, or FORATOM that is an association among European nuclear Industries (just to do some examples).

Therefore I think that EAES must keep its characteristics also for the future, giving its genuine and unmistakable contribution to nuclear science and technology development. This is my wish.

Carlo Salvetti
2000

EAES STATUTES

Statutes Adopted on June 15, 1954 Amended on July 22, 1954	Statuts Adoptés le 15 juin 1954 Modifiés le 22 juillet 1954
<p>1. <u>Aims of the Society</u></p> <p>The main aim of the Society is to promote co-operation in nuclear energy research and engineering. To achieve this aim the Society will:</p> <ol style="list-style-type: none"> a) promote the arranging at regular intervals of international meetings for scientists and engineers working in the field of peaceful application of nuclear energy; b) promote the circulation of reports and other information of unclassified nature; c) work for standardization of nomenclature and symbols in nuclear energy d) promote the study of hazard and safety measures arising from the application of nuclear energy e) promote publication of nuclear energy works, and possibly encourage the establishment of an international journal in the field; f) establish a centre of information on availability of nuclear energy materials and equipment. 	<p>1. <u>But de la Société</u></p> <p>Le but principal de la Société est de favoriser la coopération dans le domaine de l'énergie nucléaire, en ce qui concerne aussi bien les travaux de recherche que part de l'ingénieur. Pour atteindre ce but, la Société :</p> <ol style="list-style-type: none"> a) provoquera l'organisation à intervalles réguliers de réunions internationales de scientifiques et d'ingénieurs travaillant dans le domaine des applications pacifiques de l'énergie nucléaire b) provoquera la diffusion de rapports et de documentation diverse non classifiés c) contribuera à standardiser la nomenclature et les symboles utilisés en matière d'énergie nucléaire d) provoquera l'étude des risques et des mesures de sécurité connexes des applications de l'énergie nucléaire e) provoquera la publication de travaux sur l'énergie nucléaire et éventuellement encouragera la création d'un journal international dans ce domaine. f) créera un centre d'informations concernant les possibilités de se procurer tous matériaux et équipement relatifs à l'énergie nucléaire.
<p>2. <u>Membership</u></p> <p>The Society is founded by the following members:</p> <ul style="list-style-type: none"> • Belgium: Centre d'Etudes pour les Applications de l'Energie Nucleaire; • France : Commissariat à l'Energie Atomique ; • Italy: Comitato Nazionale per le Ricerche Nucleari ; • Netherlands : Stichting voor Fundamenteel onderzoek der Materie ; • Norway: Institutt für Atomenergi; • Sweden: Aktiebolaget Atomenergi; • Swizerland: Atomic Energy Commission; • UK: Department of Atomic Energy. 	<p>2. <u>Conditions d'admission</u></p> <p>La Société est fondée par les membres suivants:</p> <ul style="list-style-type: none"> • Belgique: Centre d'Etudes pour les Applications de l'Energie Nucleaire ; • France : Commissariat à l'Energie Atomique ; • Italy: Comitato Nazionale per le Ricerche Nucleari ; • Les Pays-Bas: Stichting voor Fundamenteel onderzoek der Materie ; • Norvège: Institutt für Atomenergi; • Suède: Aktiebolaget Atomenergi; • Suisse: Atomic Energy Commission; • Angleterre: Department of Atomic Energy
<p>3. <u>Invitations</u></p> <p>Invitations to join the Society may be issued by the Council (see section III) to European countries with, in its opinion, have established nuclear energy projects. In each country the invitation is to be sent to the Agency recognized by its Government to be the central Agency for nuclear energy research. If no such central Agency exists, the invitation can be sent any organization</p>	<p>3. <u>Invitations</u></p> <p>Le Conseil (voir Section III) peut inviter à faire partie de la Société les pays européens qui, selon lui, ont mis en train la réalisation d'un programme relatif à l'énergie nucléaire. Dans chaque pays (invitation devra être adressée à l'organisme reconnu par son gouvernement comme étant organisme central de la recherche sur l'énergie nucléaire. S'il n'existe aucun organisme central de</p>

<p>recognized by the Government as entitled to represent the country in the Society. Invitations to join the Society can only be issued if the invitation is approved by unanimous decision of the complete Council, and this provision of the Statutes can only be altered by unanimous decision of the complete Council</p>	<p>ce genre, l'invitation pourra être adressée a toute organisation reconnue par le gouvernement comme étant qualifiée pour représenter le pays à la Société. Une telle invitation ne pourra toutefois être formulée que si elle obtient l'approbation unanime de tous les membres du Conseil et cette présente disposition des Statuts ne pourra être modifiée que par vote unanime du Conseil.</p>
<p>4. <u>Council</u></p> <p>Council can institute Associate membership for countries outside Europe or for countries without established nuclear energy projects.</p>	<p>4. <u>Council</u></p> <p>Le Conseil pourra inviter, comme membres correspondants, les pays situés hors d'Europe, ou les pays n'ayant entrepris aucun programme d'énergie nucléaire.</p>