

EUROPEAN ATOMIC  
ENERGY COMMUNITY  
E U R A T O M

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THE COMMISSION

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Speech given  
by Mr. Pierre CHATENET  
President of the Commission  
to the European Parliament  
*Strasbourg*

February Session 1962

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*Mr. President, Ladies and Gentlemen,*

First of all, I want to thank the European Parliament for giving me and the Euratom Commission the opportunity to state our position, preoccupations, aims and hopes at a time of particular importance in Euratom's existence, in the development of nuclear energy and also, we believe, in the building of Europe.

At your previous session, as well as in various speeches and in the press, it was pointed out and emphasized that the start of 1962 has been marked by events in other fields which will have a decisive influence on the work we in Euratom have undertaken.

It has also been stressed that the whole of 1962 will in many respects be a period of important choices, of vital decisions and, we hope, of fundamental progress.

The same applies to the entire process of building the new Europe, to every individual aspect of this process — and thus also to Euratom.

I should like to explain briefly in what light the Euratom Commission views these various problems and how it is preparing to tackle them :

— firstly, by presenting them against the background of the present circumstances ;

— next, by indicating — with particular reference to Euratom's policy — the way in which Euratom will set itself an objective, take on a form and acquire resources during 1962 which will be incorporated in the second five-year programme to be launched on 1<sup>st</sup> January 1963;

— finally, because we know that our efforts in our own particular field are in the final analysis only part of a master plan, by showing the line we shall take in our attempts to fit our own enterprises into the overall framework of energy policy and economic policy, which in turn form part of the general complex of European integration.

What has sometimes been called « the atomic adventure » is an undertaking in which pure science, industrial research and technological achievements are blended in a highly complex manner. By reason of its very complexity, its novelty and its hitherto unstable character, it has conjured up in the mind of the general public a picture of a phenomenon with very distinct phases and one which seems time and again to quicken the imagination, to feel the back-wash of political currents and even to arouse the emotions. If one looks beyond this sometimes extravagantly aberrant epiphenomenon, one finds steady and remarkable progress stemming from the constantly growing intimacy of the scientist with his area of study and from the performance of ever more skilful technical feats on the part of the engineer.

And yet, perhaps because the population at large has had so little time to assimilate the ideas and achievements which initially appeared to them as having something of the miraculous and which are still invested with an air of mystery and awe, public

opinion and those who shape it have not always considered the achievements, prospects or setbacks involved in the necessary spirit of judicious appraisal. At one time in recent years, some of the most enlightened people, carried away by an excess of confidence possibly engendered more by enthusiasm than by cold reason, and also under the pressure of a very particular set of circumstances, seemed to believe that the development of nuclear energy, from the standpoint of both its volume and its rate of progress, held out prospects which, if they had been fulfilled, would within a very short while have necessitated a complete reappraisal of the whole position as regards the supply and balance of energy in Europe.

Subsequently, when the situation, and what is more, the assessment which could be made of it, changed, other no less intelligent people appeared to take the view that it would suffice to leave this new source of energy for some time to come on the plane of theory and that it should not be considered seriously as a factor in the solution of Europe's energy problem until some date in the fairly distant future — and even then to a relatively uncertain extent.

Fortunately, as I said a few moments ago, science and technology have meanwhile remained impervious both to ambitious dreams and to Malthusian apprehensions; the former has made progress in the universities and laboratories, the latter at all levels in the field of reactors and the first nuclear power plants.

As a result, it now appears to be possible, thanks to the efforts of all concerned, to undertake a serious analysis of the outlook for nuclear energy.

The aim is eventually to produce a kilowatt hour at a reasonable price. Nobody doubts that this will

one day be needed, and even in certain critical contingencies, in which the price would be a matter of minor importance. But it is more desirable to assume a normal course of events, attempting to bring about a situation in which nuclear power could compete in price with the energy produced from conventional sources; this concept of « competitiveness », it must be admitted, is itself a very relative term. Nevertheless, this provides us with a useful target to aim at, and one which is fairly clearly defined as far as the people responsible for thinking about the future development of nuclear energy are concerned.

We would now seem to have reached a juncture at which certain calculations which might appear to have no really sound bases, and might give rise to a variety of highly dubious solutions, may be adopted anew in all seriousness and may, as regards comparisons of prices of nuclear energy with those of energy derived from the various conventional sources, give percentage differences which are not devoid of accuracy and which are continually being pared down. This Parliament has, moreover, turned its attention to this problem and recently called upon the Euratom Commission to define the position in response to a question asked by Mr. Pedini.

In the light of these data it is possible, even in the shorter view, to make forecasts and it may be wondered whether, in the field of nuclear energy, this is not the precise moment for proceeding from « scanning ahead to planning ahead ». In other words, experimentation, while still the dominant phase, will tend increasingly towards practical applications with the accent on profitability, and we may look forward to a time when the continued pursuit by science and research of their

own (sometimes headlong) course will be paralleled by a line of industrial development similar to that observed in other branches of energy production.

We may therefore legitimately assume that for the peaceful uses of nuclear energy the next few years will, especially in Europe, take the form of a transitional phase.

It is precisely upon this transition phase that Euratom is preparing to embark at a time when it too is approaching the first major turning-point in its history.

The time which has elapsed since the signing of the Treaty has been for Euratom itself a phase of organization, for its aims a phase of fundamental choices and with regard to its achievements a period devoted to the implementation of an initial plan which was not of its own devising but which it, so to speak, found in its cradle, i.e. in an Annex to the Treaty from which it sprang.

During these first four years, Euratom has organized itself, created structures for itself, and recruited and allotted tasks to personnel. In short, the idea has developed into an organic whole.

These structures are simple and well-suited to the various functions entrusted to Euratom by the Treaty. They have been designed with a genuine concern for efficiency and even austerity as regards staff and resources — a fact which it gives me all the more pleasure to underline as I myself had no part in this phase of Euratom's development. Perhaps someone who has had a certain amount of experience with international bodies at one time or another may be allowed to say in all objectivity that he has been happy to note the sense of responsibility and proportion

which has informed the Euratom Commission's organization of this institution during its teething period.

At the same time, it was necessary to adopt a general course of action for Euratom, which, very wisely, it was decided to develop into a body for research and experimentation and not an instrument of production and power. Had this latter course been chosen, it would undoubtedly, by the very nature of things, have resulted to some extent in supersession of or superimposition upon the efforts being undertaken in the same field by the various Community countries.

Finally, Euratom, upon which a plan had been imposed by the Treaty itself, has proved itself in the only convincing manner, i.e. by fulfilling the plan in question. With a few months to go before the expiry of the period of its application, we may forecast that this initial plan will be 95 % implemented. It is true that the early stages were difficult, since a start had to be made from scratch, but the annual rate of progress has been increasing rapidly, and to judge by the outlook for the final year, which has barely begun, Euratom is now undergoing the acid test by which any new organization stands or falls, i.e. that of emerging from the phase in which it has more money than it knows what to do with to the phase in which it could act to greater effect if it had more.

In concrete terms, the plan consists in the setting-up of the Joint Research Centre consisting of four establishments — two for general purposes and two specialized — and a series of contracts of association which public bodies or private industry through which it is possible to carry out the necessary experiments and at the same time to train highly-skilled personnel capable of playing a decisive part in the subsequent

phases. During this period, Euratom, while consolidating its place in the Community, has also strengthened its position elsewhere and has established with non-Community countries operational links, exchanges of information and transfers of personnel which augur well for the future. These relationships, moreover, constitute for Euratom and for the countries which maintain it the test of the seriousness attached to the efforts which it makes and to its personnel.

1962 will be the last year of the initial plan and at the beginning of 1963 the Euratom Commission will submit to this Parliament the overall conclusions to be drawn from its execution. But 1962 will also be the year in which the second five-year programme is to be crystallized and approved.

I should now like to give you a few cursory views — and I apologize in advance for their aridity — on the draft programme to which the finishing touches are now being put. The Commission intends to propose to the Council of Ministers, after consultation with the Scientific and Technical Committee provided for in the Treaty, that the principal trend of its own programme should be confirmed, namely :

— A major effort in energy applications and allied research ;

— The study of controlled thermo-nuclear reactions ;

— The application of radioisotopes and radiations, including biological studies and applications, and also the stepping up of its activity in certain fields of general and fundamental interest, such as the chemical processing of irradiated fuels and radioactive waste disposal.



The development of energy applications, which must be viewed in the light of the considerations expounded a few moments ago concerning the present phase of nuclear energy, is designed to dovetail with the programmes of the individual Member States, some of which have already reached the stage of industrial-scale projects.

Action by Euratom is no less important from the point of view of enabling, in agreement with the sectors concerned, the entire Community to benefit from the favorable results already obtained under the various national programmes. Thus, in defining the scope of the « reactors » programme, which does not delimit the activity of the Commission, since the latter has a more general task of laying the foundations for the development of the industry of the « Six », account has been taken of Euratom's longer-term responsibility for preparing the reactor strings which will supplement or supersede those already at an advanced stage of development, without, moreover, neglecting the improvements to be made in these existing strings.

The Commission's proposals are therefore headed by the designing of a natural-uranium string. The Orgel type has been chosen in view of the advantages offered by heavy-water reactors, which have already been designed in Germany and France, and by organic cooling, which has also been studied in these countries and in Italy. This supplementary programme thus has the merit of incorporating the results of work already undertaken in the Member States and, conversely, the research, the bulk of which is performed under contract, is enabling and will continue to enable European industry to benefit in its own programmes

from the experience acquired in the Orgel programme. From this last, whose main focus is the Ispra Centre, sufficient experience should be gained during the second five-year programme to plan the industrial stage for both Orgel and the heavy-water or organic-moderated reactor variants developed under related programmes in the Member Countries.

Another important item in the programme is the designing of fast plutonium reactors, which had merely been initiated during the first programme. This development will be fostered by the close coordination of the French and German operations in particular and the European Institute at Karlsruhe will also play an active part. It will be the logical outcome of a natural or slightly enriched uranium power reactor programme, since it should facilitate the use of the plutonium so produced and thereby make for maximum efficiency in the projects already undertaken in the Member States.

But the programme also provides for other channels of research. The advantages of high temperature, combined with those of a high rate of fuel utilization, lend particular importance to the work on advanced gas reactors, a progressive design of the graphite-gas reactors already developed in France and the United Kingdom. It is under this particular heading that cooperation under the Dragon Project has proved fruitful, and the Commission is anxious to pursue this policy, which is centred on the extension of the Dragon Agreement and the development of the Petten Centre and certain activities in which individual countries are engaged.

As regards already proven reactor types, the Commission, on a plane where technology overlaps with

research, has fostered the construction of power plants under the Euratom/United States Agreement.

More generally, industrial programmes are coming into their own through the research and development programme to which they are linked. What is required, in fact, is to create the necessary skills in Europe for ensuring both the fabrication of the fuel charges required and the development, with entirely European resources, of the succeeding generations of reactor types which have already passed their trials elsewhere.

Even so, efforts in the purely scientific field are still accorded considerable value by the Commission, which takes the view that, besides these four spheres of activity, due attention must be paid to more advanced technologies and that its own programme and those of the various Member States must be supplemented by projects which may possibly culminate in the reactor experiment or testing reactor.

The foregoing may be said to constitute the hard core of the programme. But it would not be balanced, and Euratom would be failing in its duty to some extent, if it did not incorporate a number of other aspects. However, I should not like to strain the Parliament's patience and shall accordingly confine myself to stating some of the salient points without attempting to list them in exhaustive and no doubt wearisome detail.

In the Joint Research Centre's establishments, applied research affords the opportunity for allied basic studies, particularly in the fields of neutron physics, heat transfer, solid state physics, physical chemistry or radiation, the results of which are tributaries to the mainstream of

scientific development and may open up new and important possibilities for solving technological problems encountered in other sectors.

The Commission will continue, in close association with various efforts being made on the national plane, the projects embarked upon during the first five-year programme in the fields of neutron standards and measurements as well as the studies relating to the chemical reprocessing of irradiated fuel and waste disposal, the nuclear marine propulsion projects and radioisotopes, and also in the field — where the work is still uphill but where staggering results may be in store — of controlled fusion and thermo-nuclear reactions.

There is a sphere in which Euratom, by virtue of the Treaty and also, let me say, from the standpoint of the highest social and moral considerations, has a special responsibility. I refer to the sphere of biology and health protection. The Commission feels it essential that it should be able to ensure the fulfilment, in cooperation with all branches of science, of an adequate Community programme making it possible, by establishing a large number of contractual links, to cover every field that requires a more thorough study from the standpoint of both the harmful effects of radiations on human beings and the application of radioelements in the therapeutical, biological and agriculture sectors.

Finally, the programme will have to take account of the extremely useful role which can be played by Euratom as regards the dissemination of information within the Community. The supplying of persons and enterprises in the Community with general information in the nuclear field, and in particular with the

results of the research programmes, calls for the use of a number of up-to-date media. This activity is accompanied in the education field by the training of a large number of scientists, engineers and technicians who will one day reinforce university staffs or become industrial executives.

The programme will be carried out partly in the Joint Centre establishments, partly by means of associations and partly by means of research contracts. The relative distribution is conditioned mainly by the scientific and technical aims in view, the possibilities for cooperation and the concomitant repercussions on the general development of the Community's research organizations and industries. It is interesting to note that the tasks entrusted to the research centres, universities and industries represent more than half the activities covered by the second programme.

There can be no question of planning without bringing in the matter of financing. A programme is not merely a list of projects to be undertaken. It also has to contain a schedule of the credits to be appropriated for each of these operations.

The second five-year programme, as drawn up and calculated, would call for credits to the tune of around 480 million units of account. In view of the fact that it is complementary to the programmes of the Member States, the Commission hopes that this minimum outlay will be sufficient.

It is, of course, only in this complementary sense that it can be compared to the major atomic programmes carried out on a world scale, and even viewed from this angle it can only be described as a modest effort.

This being so, it is already possible to make three general appraisals concerning these estimates. Firstly, we believe they are reliable, i.e. that in fields in which calculation is bound up with considerable difficulties, relating as it does in large measure to operations being undertaken for the first time, Euratom's financial and technical experts, working together in close collaboration, have really done a remarkably accurate job. Secondly, we consider them reasonable, since they are compatible with the physical capacities of the resources for using the credits to be appropriated. Strictly speaking, they even fall distinctly short of this capacity, so that there is no fear that the credits will not be used. Thirdly, we feel they are useful in that they are conducive in every case to the achievement of results, the necessary steps having been taken to avoid dissipation of effort and the non-completion of projects.

Mr. President, Ladies and Gentlemen, I think I have shown you that Euratom knows what is required of it in the coming years and I hope I have inspired in you the assurance and conviction that we shall take the necessary steps to ensure that it is done and that it is done successfully.

But at the same time we know that Euratom is not an isolated organization, that it forms part of a whole and that our activity must fit into a number of more general settings. It is indeed by this criterion, and by this criterion only, that Euratom's contribution to the building of the new Europe will gain its full value.

First of all, since we are concerned with energy, it is important that Euratom's programme should be viewed against the wider background of an energy policy on the European level. This policy has recently

been, and will be again, during the present session, brought before your Parliament and your Commissions, and you know that it is also being studied by a committee consisting of members of the various Community executives.

It is true that in the phase immediately ahead, i.e. the period covered by the second five-year programme, there is as yet no question of production in such quantity as to have any substantial influence on the overall balance of energy in the Community. But to the extent that our experimentation gains definition and inasmuch as its present object is to pave the way for the industrial production phase, and also in view of the fact that an energy policy on the scale of a territory such as the European Community cannot be confined to short-term planning but must look ahead for a long period beyond a mere five years, it is undoubtedly the duty of the responsible officials of Euratom to ensure that their forecasts are consistent with the data relating to energy demand, production trends and the pattern of conventional energy costs.

Any change in any one of the many factors which now and will in the coming years make up the Community's balance of energy may be mirrored in the profitability of nuclear energy as regards use, time and I would even go so far as to say place.

It will therefore be the responsibility of the Euratom authorities — and they will not fail in this duty — to keep a constant watch on the trend of such factors and, by regular exchanges of views with the Economic Community and the Coal and Steel Community, to determine the outlook for them within this overall context.

Taking another aspect, a programme as important as that viewed from the standpoint of view of outlay and industrial application cannot fail to be reflected in the economic activity of the Community's Member States. As around 90 % of the total sums involved in this programme will be spent in the Member States, the resultant influence will be by no means negligible.

The Euratom Commission is at present engaged in a study of what might be called the industrial impact of this five-year programme, a factor which, moreover, does not lend itself easily to definition. While it may be easy enough to grasp what it means to this or that industry to supply or process for Euratom, as a research body, materials or instruments it requires for its experiments, it is less easy to ascertain the influence of an industrial policy which is directed, by means of association or research contracts, at providing work for those industries which may either directly or indirectly be affected by the revolutionary changes of the nuclear age and thereby at preparing them technically, and one might almost say mentally, for such changes.

There can thus be no doubt that Euratom is already lending the Community's industries substantial aid in the matter of information, equipment and specialists. But our initial studies have shown that a very large part of the sums to be spent by Euratom under the second programme will, in a form more directly and more immediately perceptible in the economic sector, swell industrial turnovers in the Community countries.

What this means in effect is that those whose job it is to study the outlook for the Community States' economies in the years to come and to develop, as far as possible, a joint policy for the Member States and Community institutions must henceforth make allow-



ance in their calculations for a factor of no mean importance : the financial and industrial consequences for Euratom's programmes.

Here too, it is clear that Euratom's primary concern will be to supply those in the Community upon whom this heavy task devolves with all the data they require. Is it necessary, in the same connection, to recall that on a far more general plane, and of course in the longer term, the strategic aim of an effective economic policy for Europe is above all to win the battle of living standards ? Hence, successful research leading to a boost in the available energy, and even some day to a cut in the price, would undoubtedly help us to gain our objective.

Last but not least, we know that Euratom's existence, Euratom's activity and Euratom's achievements form, in the final analysis, only part of a canvas much vaster in scope, purpose and hopes — the building of the new Europe.

We know that we in our particular field are contributing a stone to the edifice and we also know that, without the edifice, the stone would have little significance. This structure, whose foundation is developing over wider ramifications each day but whose summit is still ill-defined, must be our constant preoccupation. We know, of course, that it is primarily through the quality of its technical achievements, through the purposefulness of its programmes and through the success of its scientists, engineers and technicians of all grades that a technical organization such as Euratom will merit esteem and play the most useful part.

But we know too, and it behoves us to be aware of the fact, that by force of circumstances, and because this is the spirit of the Rome Treaties, we bear a measure of political responsibility; we shall therefore not shirk our duties in this respect.

To the extent — and I believe it is considerable — that experience of the teamwork being carried out daily in the Communities, and, I may say particularly at Commission level, experience of the team-spirit can be of use in finding formulas suitable for ensuring cooperation in fields more general, less specific, less technical than those which constitute the scope of the existing Communities' activities, we shall pass the benefits of such experience on to those who have the difficult task of devising the formulas in question. We are following attentively the valuable contribution which your Parliament is making to these efforts, and in particular the report quite recently presented by the President, Mr. Pleven.

Obviously our experience only concerns part of the problem; in other fields, of course, the problems are stated in other terms. In every case, however, it is equally clear that no formula can succeed except on the basis of a spirit of cooperation and the practice of teamwork. It is reasonable to think, and, moreover, quite easy to understand, that some time will elapse before solutions are found for highly complex institutional problems and that the solutions themselves are no doubt likely to be no more than piece-meal. In such a field there is of necessity a delicate blending of boldness and circumspection which strains our patience but which finally ensures the soundness of our foundations. We for our part will have the feeling of having made a useful contribution to this process,

which at times we may consider rapid and at others tedious but which are at all times certain will be carried through because it is in the nature of things, if we ourselves furnish proof that teamwork is possible, that it can be efficient and that, in a European context, it will have its full effect.

Mr. President, Ladies and Gentlemen, I have tried to show you in broad outline the basis upon which, and the spirit in which, the European Atomic Energy Community is preparing to embark upon a new phase, the second, of its existence.

To bear responsibilities for the future is no sinecure in an age such as our own, when we have to keep our heads in the face of the changes which are taking place incessantly and must endeavour not to succumb to discouragement at the idea of possible setbacks.

On the other hand, it is imperative to draw up programmes and our experience proves their utility. But it is also essential to infuse into their implementation the necessary degree of flexibility.

In this connection, there is one point that must be made clear to this Parliament in response to a question which it will certainly have to tackle. In 1962, the European Communities are confronted with the problems raised by the possible entry of the United Kingdom. Obviously a contingency of this importance must enter into the calculations of those whose task it is to draw up a programme of activities for the coming five years. In other words, the detailed nature of our programmes would not appear necessarily to constitute an obstacle, in view of their general tendency, to any adaptations which may prove desirable.

Mr. President, Ladies and Gentlemen, let me close with this thought, because it seems to me to epitomise, as far as I myself am concerned, a certain attitude of mind at the point we have now reached, in the times in which we are living. Action cannot be undertaken except on the basis of forecasts. And the only sound forecasts are those which are based on facts. But they only bear fruit if formulated in the light of a process of expansion and if invested with the requisite degree of imagination. This is the blend of realism and daring which is the driving force of all great undertakings.

It is our firm resolve to employ both in the building of the new Europe.