

European Solidarity: Energy and Security. A Vision for a Common Future*

Jerzy Buzek

As we all know, Konstantinos Karamanlis challenged Greece to pursue its European destiny. The topic of my article is precisely this challenge: our common European destiny.

European integration after the Second World War started with the Coal and Steel Community. It is a very important symbol for us, because coal was at that time – and is still today – the essential source of energy for economic and military development. The Founding Fathers of Europe were talking and thinking about a Coal and Steel Community, but in fact they wanted to avoid war on their continent, because it was absolutely certain that with a common policy in the coal and steel industry, it wouldn't be possible to start a war with another country in the community.

So we can say that the European Community began with energy, with coal, and that the second step was the Treaties of Rome. Thus Euratom became one of the communities that continued almost until today. It is very, very significant that over the second half of the twentieth century we are still talking about energy all the time.

At this specific moment in our history we are talking about a much wider community of democratic states, and we are starting to discuss a common European energy policy, in other words, an energy policy which would be common to all EU member countries. It is quite a new idea, and could probably solve some very important issues for us.

But our discussions take place in the wider context of major dilemmas regarding European integration.

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The fate of the Lisbon Treaty remains undecided. This is not about a defeat of a broader vision of the European Union. It is not only about the question ‘What kind of Europe would we like to build?’ At the end of the day, it is not only about our ambitions, but also about a common foreign policy. The problem with the Lisbon Treaty, even if it is only a temporary one, is that it has direct, specific consequences on the everyday functioning of the EU. This is not to say that it is not working properly; but it is to say that it is not working in an optimal way.

We, the EU, are a ‘political dwarf’ if we compare our political strength with our economy, which is almost the largest in the world. It is very difficult to introduce our Lisbon Strategy one or two years after the changes we made to it, because, since 2006–07, we have adopted quite a new strategy, a renewed one, because we failed to achieve a lot in the first implementation period from 2000 to 2005/6.

Moreover, the Lisbon Strategy has to deal with the issue of competitiveness and the exit from the economic crisis. We must, therefore, recognise and distinguish the following: the Lisbon Treaty is directly related to the political strength of the European Union and the Lisbon Strategy is directly related to the economic strength of the European Union. But we must distinguish between the two and I think it is good news that it is totally up to us to make the EU a major power in whatever field we decide. We need only to master our political will and believe in our own potential. This is currently the most important issue facing the European Union.

I think it is as simple as that. There is no need for a new world order, or a new economic school to be developed, merely to overcome crises. We need the political will to work together and to move forward together in the European Union. We need the kind of approach I sometimes find is met with surprise among many of my colleagues in the European Parliament, especially those from Western countries. And I can say that this approach, the belief in our own potential and our will, is a recent contribution of the Eastern European countries, whose political experience of the 1990s or 1980s, or even the last century, taught a much different lesson than the one learned in the West.

I think that many of the experiences faced by Greece are very similar to ours from Central and Eastern Europe. So there is no challenge other than the political one. The Lisbon Strategy is an economic challenge we are facing today, requiring us to be more competitive, especially today in a time of global crisis.

Another major issue we need to focus on is threats. One such major threat is demographic. We are a continent in population decline and we know it. Europe's demographic situation has repercussions for Europe's economies, economic relations and our way of life, which is very comfortable under the social welfare shield. Yet these repercussions are so complex that it is impossible to dwell on them in detail. And, after all, in Greece the effects of the demographic problem, such as immigration, are quite well known. Although Poland faces no immigration challenge, the demographic problem there is probably much worse than in Greece. However, demographics is not Europe's only problem.

I would like focus my analysis on energy issues, specifically, the energy policy of Europe, which is connected with the obligation to combat climate change. This is quite a new obligation that was not an issue five or ten years ago.

Apart from the traditional dilemmas of oil and gas prices, finding reliable suppliers, diversifying suppliers or developing new, more energy efficient technologies, we have taken on the responsibility of radically changing our approach to energy. It is a radically different approach of strategic importance, although not in a traditional, narrowly defined geopolitical sense.

Today it is climate change that is at the heart of our fears, but also of our hopes. The climate and energy package naturally brings on all European member states serious obligations that are symbolically presented by the 20-20-20 approach. This means a 20% reduction in greenhouse gas emissions, 20% in energy savings and a 20% share of renewable energy by 2020. Additionally, a 10% share of renewable energy in road transport (Figure 1).

Equally, though, it brings a whole spectrum of opportunities. We should always think of the opportunities that emerge, not only the threats. There is great potential for development. The climate and energy package provides major incentives for innovation in energy, and research and development in the field of new technologies such as clean coal, nuclear energy, new modes of energy transmission, fully integrated energy networks and so on and so forth. First of all, however, we should reduce our energy consumption and focus on renewable energy sources.

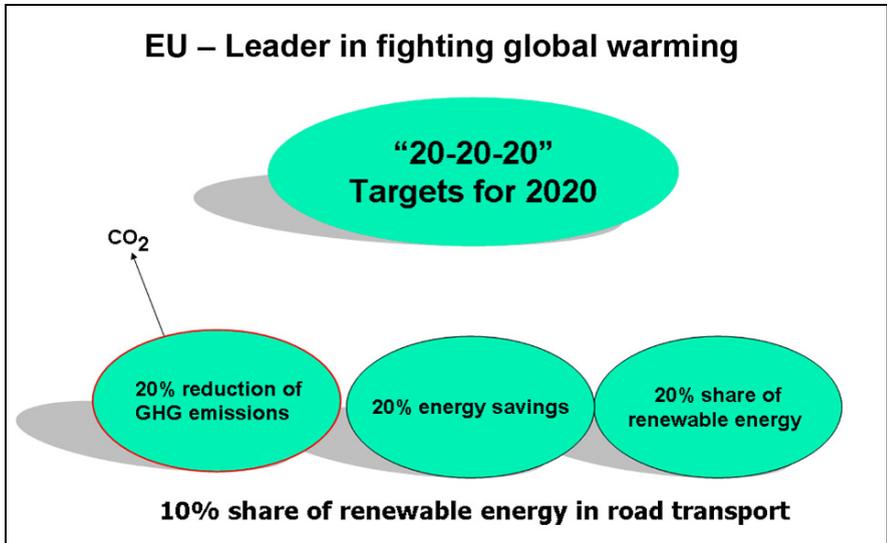


Figure 1. EU – Leader in fighting global warming. Targets for 2020

Developing this potential will have consequences not only for the field of energy policy but also for military technologies, and we will find much wider applications in the future for everyday life.

Currently, we have renewable energy sources, fossil fuels and nuclear power. Fossil fuels include coal, oil and gas. We today identify energy efficiency and savings as our top priority, because the cheapest energy is the energy which it is not necessary to produce. And we must also remember that the demand for energy in Europe doubles every 30 to 40 years.

Moreover, there are the goals set by the EU: security of supply, environmental protection through climate protection and competitive costs for energy; the most important goal being security of energy supply. We have to understand that we are helpless without energy while not ignoring, of course, the importance of environmental protection. Moreover, we should not forget competitive costs, given that security of supply costs dearly. However, we will be able to overcome our economic problems with the Lisbon Strategy. So we must ensure competitive energy costs or else we will fail to meet the Lisbon Strategy goals. It is only new technologies that can provide a solution to this problem (Figure 2).

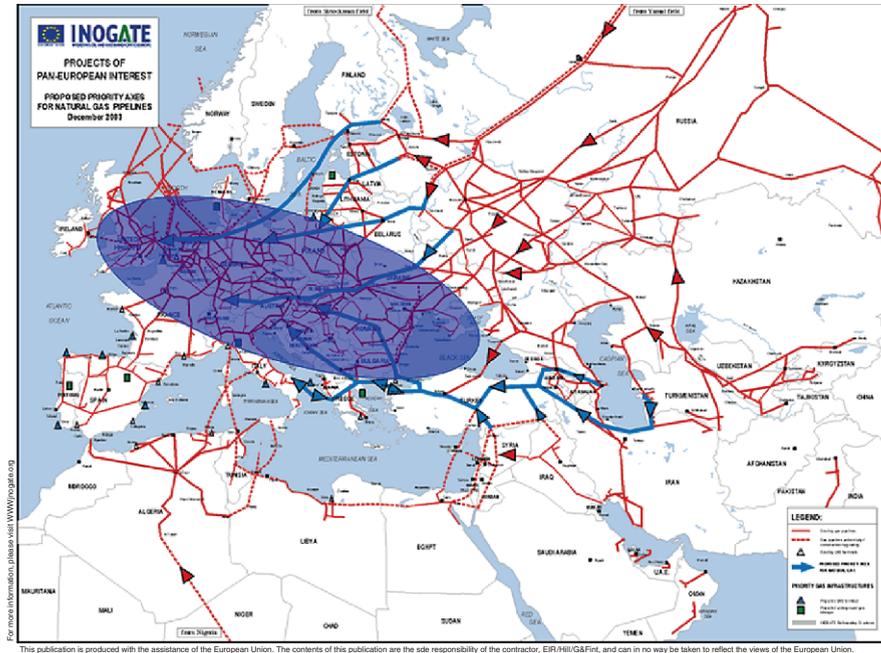


Figure 2. Integrated hydrogen generation from fossil fuels, biomass and wind

Additionally, it is very important to see how new technologies could help our economy grow. The most important issue is energy efficiency and savings. We should remember that renewable energy is still expensive to generate. Renewable energy is of especial interest to Greece, but it is equally important for every other European country. The use of local and decentralised sources of energy is a major issue for an insular country like Greece. It is very important that our energy policy has such a starting point if we want to develop new technologies and have security of energy supply.

The situation in Poland is very difficult. We have limited solar and wind energy potential, and although we have large amounts of biomass and biogas, things are still very difficult. But it is only one country in the European Union.

A very good example for Poland is Denmark, which uses wind energy and biogas extensively and solar energy to a lesser extent. They have moved from 20 or more large electricity generating stations to thousands of dispersed supply plants (Figure 3).

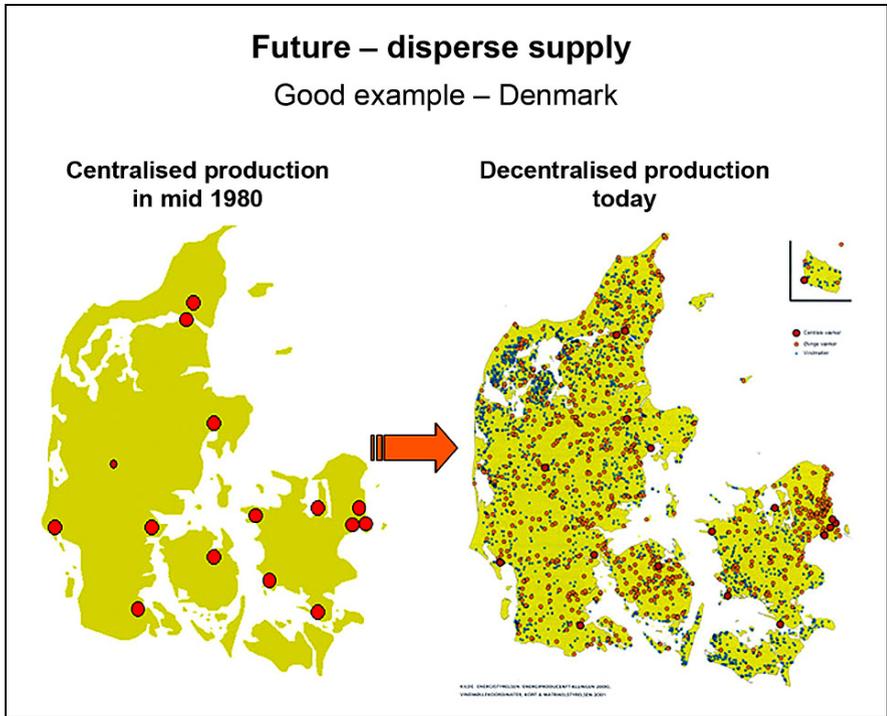


Figure 3. Future – disperse supply. Good example – Denmark

For Greece renewable energy technologies, particularly solar, are of major interest. There is much interest and a great deal of research going on presently in Europe and the world on renewable energy and solar energy in particular. There are some projects in the Sahara Desert to develop enormous solar energy production in the future.

To understand the significance of renewable energy, in terms of not only climate change but also economy and politics, it suffices to look at the economic recovery plans of both President Barack Obama and the European Commission. Our economic recovery plan provides for major investments in sustainable energy projects as part of its recovery package, and renewable energy is the most important part.

With regard to other energy sources, in Poland there are mainly fossil fuels, namely coal, gas and oil. There are shortages in supply, since we don't have our own coal. The solution of the European Commission is to combine renewable energy sources. Moreover, in the European Union area we can easily combine coal and renewable energy, making this combina-

tion highly effective. In my country, of course, coal remains very important. I think that the combination of different energy sources could be a solution to many problems in Greece also.

But coal provides us with some other possibilities; it enables us to produce synthetic gas through coal gasification. This diversification of gas supply could be achieved through gasification of either lignite or hard coal.

We have only just started constructing two big facilities in Poland, and in a few years we will probably be able to produce our fertilisers/raw materials in the chemical industry directly from coal rather than from natural gas imported from Russia. We also know that synthetic gas produced from coal could be used in our households, or even everywhere. This is a possibility you must also consider in Greece. I am pointing this out because there is really no doubt that new energy technologies will be an extremely important driving force in the near future and especially in times of crisis. This is a major opportunity, a chance we cannot afford to waste.

What will the outcome of these efforts be? An economic boom, high competitiveness and, due to highly advanced technologies, more highly qualified workplaces. It is also true though that these efforts will lead us to substitute new energies for the traditional sources, namely gas and oil.

At EU level, there is ample support. Resources for R&D and new technologies are growing compared with structural funds, which are declining, or agriculture funds, which are also dwindling. As indicated in Figure 4, in

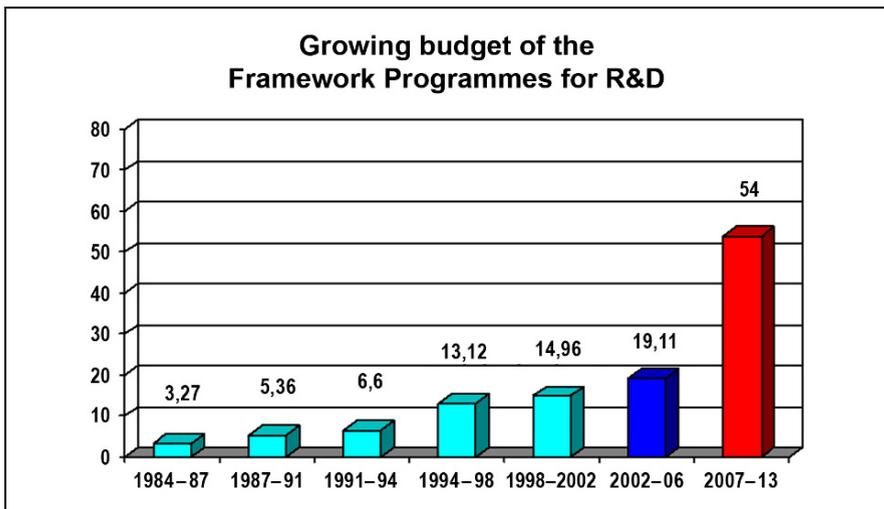


Figure 4. Growing budget of the Framework Programmes for R&D

forthcoming years R&D and innovation will be allocated €54 billion. In the Seventh Framework Programme, energy is for the first time a top priority. Energy has slowly become, step by step, the most important issue in these programmes.

Another fairly recent development is the establishment of the European Institute of Innovation and Technology (Figure 5). It is the knowledge and innovation communities, as well as sustainable energy, that play the leading role in this institute, set up at the end of 2008. That it has given priority to calls for proposals only for sustainable energy implies that this is the most important issue for the European Union; a lot of funds will be spent on it in the future.

The issue of energy is tightly linked with security. There cannot be security without a secure energy supply. By choosing to make such investments, we can also overcome problems caused by the crisis, because at the EU level we can have constant support for such development, for ideas and investment.

I should come back to the climate and energy package. We were talking about this issue in 2008 and we concluded the climate and energy package

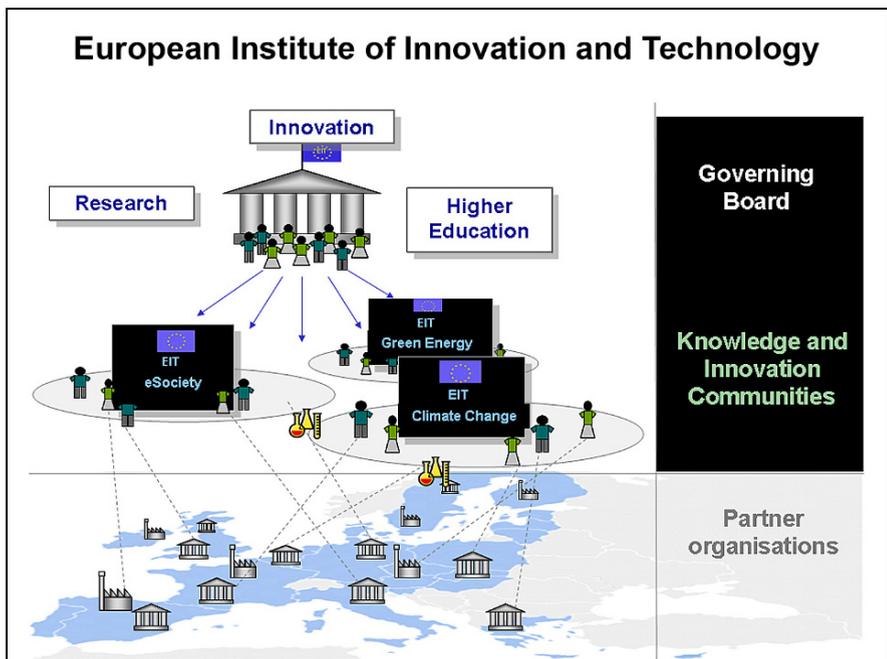


Figure 5. European Institute of Innovation and Technology

in December. The climate and energy package introduces maximum values for CO₂ emissions and charges for the countries that exceed these values. This is unprecedented, as no country had incurred economic or other costs due to CO₂ emissions five or ten years ago. Sulphur dioxide (SO₂) is yet another issue that has recently emerged.

Removing CO₂ or minimising CO₂ emissions is costly at EU level. As in all cases, environmental protection comes at a cost. In this respect, too, the European Union has introduced the European Strategic Energy Technology Plan (SET Plan). It is the first time that such a plan for industrial initiatives and research has been set up in the European Union. The plan brings together researchers and industry, engineers and professors, and aims at creating new technologies and developing a completely new way of overcoming our climate and energy problems.

Figure 6 is quite characteristic in that it shows the European Industrial Initiatives: the industrial wind initiative, the solar initiative and the bio-energy initiative. The first two are the most important for Greece. The European CO₂ Capture, Transport and Storage Initiative is rather typical. It concerns the use of coal, specifically, and it is very important to have such initiatives to demonstrate that the goal of zero CO₂ emissions is a possibility.

The use of wind and solar energy, as well as bioenergy, has a similar purpose, because they generate zero CO₂ emissions, too. The same is true for nuclear energy. Therefore such initiatives, which are supported by the EU, are very important. We have, for instance, fission, wind energy, energy efficient buildings and coal when we use coal to generate not only

The European Strategic Energy Technology Plan (SET Plan)

European Industrial Initiatives (EIs)

- 1. European *Wind* Initiative**
- 2. *Solar* Europe Initiative**
- 3. *Bio-energy* Europe Initiative**
- 4. European CO₂ capture, transport and storage initiative (CCS)**
- 5. European *electricity grid* initiative**
- 6. Sustainable *nuclear fission* initiative**
- 7. Energy *efficiency* and energy *savings***

Figure 6. The European Strategic Energy Technology Plan (SET Plan)

electricity but also heat and chemicals. We can have efficiency of such production as high as 50%, while today, producing electricity only, the efficiency is 35%. So we are losing our coal. It is very costly to transform only 35% of the coal into something useful. In the case of polygeneration, we can achieve 50%, or even more than 50%, and be much more efficient. We also have fusion. Fusion is different from fission; a typical example is the use of hydrogen in cars. So the time horizon is probably around 20–30 years, and for fusion probably 50 years. All these data are detailed in Figure 7.

For now, oil and gas remain dominant in the energy sector. As long as we are dependant primarily on coal, we will continue to have a problem with oil and gas in Europe.

In this area we are faced with a new reality, a new framework for shaping our policies. Just as the climate and energy package adds a new dimension to energy policy considerations, so too does the third energy package, which places emphasis on the problem of security of oil and gas supply, as well as electricity supply. It is the third energy package that is now the

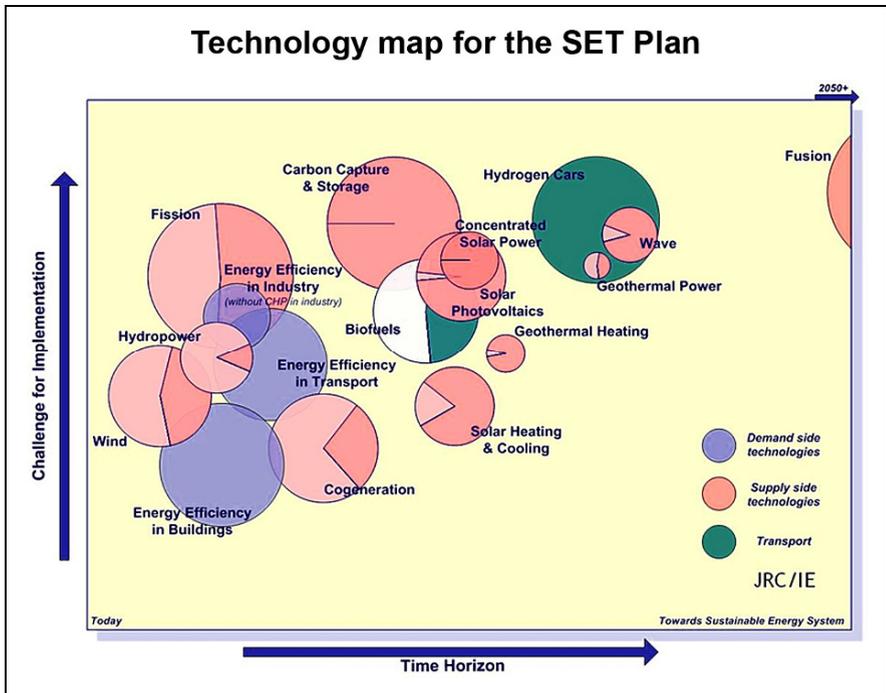


Figure 7. Technology map for the SET Plan

topic of discussion among three EU institutions: the European Parliament, the European Commission and the European Council.

How will this third energy package change the landscape in the energy area? Based on the very same principles that have laid the foundation for European integration since the '90s, and which have been developing ever since, it means a common market in electricity and gas, a stable legal and regulatory environment, an agency responsible for the regulation of cooperation, an agency for cooperation among energy regulators and cross-border connections in electricity and gas. In practice this means that the EU countries will be able to help each other when there are shortages of oil and gas or electricity supply.

And what do we expect to gain, in terms of principles? How do we aspire to benefit from the third energy package in the area of values that shape our common present and future? The answer is that we will benefit in those fundamental areas upon which our common European past is grounded.

The third energy package will make the postulated European solidarity a reality and will ensure more security of energy supply. It will drive us towards solidarity and security – values that underlie our common European experience.

The map outlined in Figure 8 is probably the most important from many points of view. It is exceptionally important for Greece, which is slightly apart from the centre of Europe. The same is true for the Baltic states and Finland, or even Poland. As a matter of fact, we in Poland don't have electricity or gas transmission connections; so Poland, like Greece, has problems in this area.

And, as can be seen on this map, natural gas is flowing into Europe from East to West, as is the case with our political dependence. We are politically dependent on the eastern part of Europe, because we need energy, and we are afraid of losing our supply.

So there can be no security today without stable energy supplies. I wouldn't like to explain all the connections, because they are very complicated. Some of them, in fact, have not been built yet. They are only proposals, like the North Stream or Nabucco pipelines.

And all states have to realise that without stable energy supplies there is no security today in any field. Social security is a major challenge, but it is the security of energy supplies, as we saw at the beginning of this year, which is seriously threatened at the present moment.

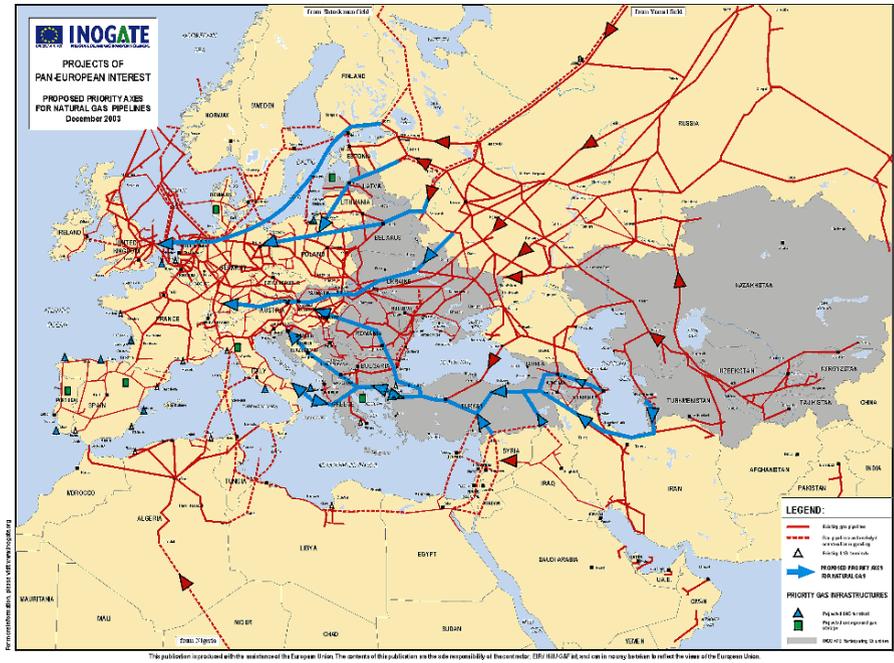


Figure 8. Proposed priority axes for natural gas pipelines

Conclusions

Energy supply, and the eventual shortage thereof, has repercussions in every sphere of the politics of countries. It also has a military dimension. So it is worth reiterating that solidarity and security underlie our common European experience. Security now has two brand new and important dimensions: energy supply and climate change prevention.

But how did our common European experience, the European vision which must also have motivated the great Greek politician, Konstantinos Karamanlis, come about? How did we manage to turn the strong values, the high ideals, into successful reality?

At this point I would like to recall the words I heard very often in the Solidarity underground when we started to fight against Communism in my country. We often used to say at the time, 'The answer to a problem is not a piece of paper or a meeting or a strategy. The answer to a problem is action.' So we undertook action and managed to gain something enor-

mous. We couldn't even imagine, back in the '70s or '80s, being a free country, a member of NATO and the European Union.

The situation is similar with regard to energy. We have today the necessary studies on security of supply, security in the energy field; there are thousands of pages of paper. We have had and held thousands of meetings. We have the necessary strategies in place, as well. So now it is time for action.



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