Notre Europe
Thinking a united Europe
Penser l'unité européenne

FRAMEWORK NOTE – Energy Project
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INTRODUCTION

The **energy issues** faced by the Union today and in the future are numerous and unprecedented in scale (I). Whereas **many constraints** (II) affect the energy situation in Europe today (and increasingly so until at least 2030), the European Union must guarantee the energy supply to its consumers, while simultaneously preserving (or improving) the competitiveness of its economy and promoting sustainable development both internally and externally. The **numerous factors blocking** the creation of a genuine common energy policy, together with doubts over the current capacity of the EU and its Member States to meet the challenge, lead us to ask whether the Union disposes of the necessary legal foundations to conduct such a common policy (III).

I. MULTIPLE FACTORS AT STAKE

Factors of energy security

Humankind consumes more resources than nature can provide. Europeans, who represent 7% of the world population, use 17% of world natural resources each year. In general, demand for energy should continue to grow markedly over the next 20 years. At a global level, **primary energy consumption is due to increase** by 45% by 2030. The needs of developing countries alone will account for 87% of this rise, with China and India taking half (*Source: World Energy Outlook 2008, IEA*). The European Union's consumption will increase by 11% (*Source: DG TREN, Trends to 2030 – European Energy and Transport, 2007*).

Fossil-fuel energy will continue to dominate the energy mix across the world (80%) and Europe (78%) during this same period. At a European level, oil (35.3%) and natural gas (25.7%) will remain the dominant resources, followed by coal (16.7%), renewable energies (12%) and nuclear energy (10.3%). The complete substitution of fossil energies by alternative sources remains unlikely in the near future, in particular due to delays in developing the necessary new technologies and the persistent difficulty of connecting sources to the electricity network (*Source: DG TREN, Trends to 2030 – European Energy and Transport, 2007*).

Fossil-fuel resources are also becoming increasingly rare. Given proven resources, current technologies and the coming increase in consumption, the current extrapolated lifetimes are 40 to 50 years for oil, about 65 years for natural gas, and about 250 years for coal (*Source: World Energy Outlook 2008, IEA*). The exhaustibility of these resources is paralleled in the European Union, where the production of primary energy has fallen considerably in the last 10 years, causing increased reliance on imported energy. An example is the United Kingdom, which is now a net importer of primary energy (21.3% in 2006) (*Source: Energy, Transport and Environment Indicators, DG TREN, 2008*). Whereas the Union already imported 54% of its energy needs in 2006 (*Source: EU Energy and Transport in figures, DG TREN,*

2009), its imports will reach 67% in 2030, with a relative 95% of its needs in oil and 84% in natural gas (*Source: DG TREN, Trends to 2030 – European Energy and Transport, 2007*).

The **European Union's dependence on external sources for its energy supply** should therefore increase. International competition for these fossil-fuel resources has become a major issue for the years to come. Increased consumption of increasingly rare fossil energy has stoked major international rivalries. Countries supplying fossil energy have understood their interests and are trying to maximise their advantage, not only in economic terms but also on occasion as a political lever vis-à-vis dependent states. The great economic powers, emerging or otherwise (United States, China, India, EU, etc.), have committed themselves to unprecedented strategies of energy-source diversification. Various competing and controversial projects for oil and gas pipelines along diversified supply routes have thus emerged (such as Nabucco versus South Stream, Nord Stream, etc.).

This competition has a particular impact in Europe, where the **increasing vulnerability and dependence of EU Member States are causing intra-European rivalries which undermine the solidarity principle at the heart of European integration**. For example, the gas crises between Russia and Ukraine (repeated between 2006 and 2009) have shed light on the acute vulnerability of certain Member States (essentially in Central and Eastern Europe) as well the patent lack of solidarity – both in practice and in law – between members of the Union. To meet the challenge of energy security, these states face a little-diversified range of sources; increased dependence on Russian gas; a lack of necessary infrastructure for the creation of a Europe-wide energy network; limited storage capacities; and persistent technical difficulties (for example, in allowing the direction of pipe flow to be switched between countries when supply is broken) which prevent states from helping neighbours in times of crisis. Is another severe crisis necessary in order for it to become clear that, in this domain as in others, there can be no satisfactory solutions without increased cooperation between Member States?

Environmental factors

The nefarious consequences of the advanced scenario of global warming oblige our societies to reduce carbon emissions in order to guarantee the sustainable development of the planet. According to the projections of the Intergovernmental Panel on Climate Change (IPCC – UN), world emissions of greenhouse gases (GHGs) will increase in a constant scenario from 25 to 90% between 2000 and 2030, resulting in a temperature increase of 0.2°C per decade. Such a rise would have disastrous effects for nature, humankind, society and the planet in general. The cost of inaction would be out of all proportion to the cost of action. According to the 2006 Stern Report, without public action the costs of climate change would rise from 5% to 20% of world GDP, whereas the costs of a policy of major GHG reduction would represent around 1% of average annual GDP. The **fight against climate change** demands the development of a low-carbon society, implying radical changes in production and consumption.

Confronted with this situation, the **Union has demonstrated its capacity to play a leading role** in the fight against climate change. It has defined common positions, defended them and shown real leadership in the international negotiations. It must maintain this cohesiveness in the final negotiations before the Copenhagen Summit of December 2009 in order to convince the United States and emerging countries to associate themselves fully with this effort at reducing emissions. This general position of the Union must also rest on a solid internal strategy in which it respects its own commitments – to reduce its GHG emissions by 20%, to increase renewable energy's share to 20% of the total, and to increase energy efficiency by 20%, all by 2020.

In addition, the Union will not be credible unless it is **able to act on its own energy consumption**. It has become imperative to make progress on energy efficiency and to take action on the demand (consumption) of energy, as well as on the development and financing of low- or zero-pollution new technologies. Neither will European action be credible if the Union lets its citizens believe that they can continue not to pay for energy at its real price. This price must take account of the fact that resources are rare and that their consumption has a negative effect on the environment. That will mean being able to **harmonise taxation in energy matters, and channelling the resulting resources to a common fund** which can finance useful actions for controlling consumption, developing alternative energy sources and fighting greenhouse gas emissions.

Economic and social factors

Energy is a major economic and social issue for the future of our societies. The priority must be to **guarantee consumer access to energy at low and stable prices**, and to protect these prices, but also to **guarantee the competitiveness of European industry** and develop green technologies. The Union faces numerous constraints in this domain, such as the ever-increasing volatility of raw material prices, the need to renew ageing infrastructure and build new infrastructure, the need to develop clean technologies, and also the major need for financing.

The **constantly increasing volatility of raw-materials prices** on the world market is a permanent factor of instability, affecting negatively and directly the price of consumer energy. There is a danger that the major rise in fossil energy prices over the last few years (the average price of imported crude oil was $33.33 per barrel in 2000, $69.33 in 2007, $120 in summer 2008 and $60 in summer 2009) will continue into the future (*Source: End user petroleum product prices and average crude oil import costs, 2009, IEA*).

The **construction of an efficient Europe-wide network of infrastructure** is indispensable if consumers are to be guaranteed secure access to energy. To this end, the Union must give itself a capacity for collective action in order to invest in energy transport networks and other infrastructure (e.g. oil and gas pipelines, electricity networks, storage facilities for liquefied natural gas (LNG), etc.). Member States' ageing infrastructure must be renewed, developed and completed by the realisation of trans-European infrastructure which currently lacks (interconnections and other facilities). These diverse projects necessitate major investments and a serious financial commitment on the part of the Union. According to the European Commission's "Priority Interconnection Plan" (2007), at least 30 billion euros will need to be invested in Europe's energy networks before 2013, comprising 6 billion for the transmission of electricity, 19 billion in gas pipelines and 5 billion in LNG storage facilities.

At the same time, the Union must give itself the means to **finance research programmes and encourage the emergence of new technologies** which take into account the factors – energy-related, environmental, economic and social – involved in building a 27-country network, assuring low-carbon energy transport and distribution, and guaranteeing energy security. These new "green" or "sustainable" technologies must allow the European Union to respond to demand and to advance towards greater energy efficiency by helping consumers to change their habits. In order to reduce the increased dependence on fossil energy, the Union should also invest more in projects to develop renewable energy. The impact of isolated and fragmented national research programmes is decidedly weak in relation to the scale of the challenge. According to a recent European Commission communication, the European Union should invest an extra 50 billion euros in low-carbon technologies over the next 10 years. This implies a tripling of annual investments (from 3 to 8 billion euros) (source: Press release IP/09/1431, 07/10/2009).

The **building of an internal energy market and free competition** are the two instruments given priority by the Union in order to guarantee that consumer demand is satisfied in the best conditions. These conditions must be fulfilled if the **Union is to act effectively, both internally vis-à-vis the energy operators and externally vis-à-vis producer countries and transit countries**.

II. THE UNION'S POSITION IN RELATION TO THESE FACTORS

Main obstacles

At its origins, the European Union successfully **developed a coherent response to current (coal) and future (nuclear) energy challenges**, as they were perceived at the time, with the creation of a European Coal and Steel Community (ECSC) in 1951 and the Euratom Treaty in 1957, dealing with civil nuclear energy in Europe. But since then **the Union has moved backwards in the domain of energy integration**. The ECSC expired without renewal in 2002, the Euratom treaty was placed in quarantine, oil has remained outside the reach of treaties, and the question of gas and electricity was only broached in the 1990s – and this simply in the context of the single market and competition, rather than as an issue in itself. It is only since 2005, with the adoption of the "Energy-Climate" legislation package (European Council of 11-12 December 2008, Brussels) that conscience of energy issues and European vulnerability has truly emerged – belatedly and immediately subject to the pressure of external events (gas crises, rocketing prices, etc.).

Nevertheless, the Union is still experiencing numerous difficulties in implementing a common energy policy. Among the **main obstacles** preventing the EU from responding effectively and coherently to the above-mentioned energy challenges are: a national sovereignty on the choice of energy resources used (energy mix); the preference given by Member States to (non-EU) national and/or international solutions to the late 20th century's energy crises, and preference accorded to bilateral relations with producer countries, in the name of national interest; and a certain reluctance of Member States to share natural resources with neighbours. To these various obstacles can be added the absence of a legal basis in the treaties permitting the Union to develop a genuine overarching energy policy, and the timidity of European institutions in promoting such a policy.

The Union's energy policy has thus **developed belatedly and without an overall vision**. In particular this concerns the necessary balance and trade-offs between the three main objectives which the policy must pursue: energy security, competitive access to energy, and sustainable development. Among these three objectives, all effort has long been concentrated on the internal market and free competition, **to the detriment of the two others and the coherence of the ensemble**.

The EU's weaknesses

Concerning the internal energy market, the Union today constitutes only **the sum parts of 27 national energy markets which are liberalised but heterogeneous and fragmented**. The fragmented opening of gas and electricity markets in the 27 Member States, along with weak transnational competition and weak added value for consumers in terms of reduced energy prices, have obscured the potential benefits of a true Europe-wide liberalisation of energy markets. Recent legislative initiatives adopted in the framework of the internal market (third legislative package) appear insufficient to build a single internal market. Such a market needs rules and authority in order to guarantee the correct application of such

rules. Only a single regulator of the gas and electricity markets can guarantee that the operators will supply, in good time and at the best price, the energy necessary to satisfy demand. In relation to this, it is reassuring that, directly following the adoption of the new package of legislation, the European Commission launched infraction procedures against 25 Member States for non-application of the prior energy package (adopted several years previously) and/or the non-respect of their obligations relating to competition and the internal market. The temptation of a headlong rush seems real.

The Union also suffers from a **damaging lack of credibility**. It remains incapable of speaking with a single voice on the international energy scene, either within the relevant forums or, even more so, vis-à-vis producer and transit countries. This prevents it from exerting its full weight (economic, commercial and political) in its relations with interlocutors. The realisation of a true internal energy market would also make the Union a weighty partner in negotiations with producer countries.

This lack of credibility is linked to the absence of **energy solidarity between members**, in practice and in law. The mechanisms for preventing and managing crises are still insufficient to respond effectively to crises on a scale like that of winter 2009 between Russia and Ukraine. In addition, numerous technical obstacles today prevent the Union's Member States from making practical responses to a rupture of supply to their neighbours, even when they wish to give help. A Russo-Ukrainian crisis can thus hide another crisis – an intra-European one.

Finally, the **capacity of the Union** to finance the necessary projects is at stake. We can regret the **small size of the sums allocated to the energy issue in the European budget**, which doubtless can be **explained by the belated emergence of the energy issue in European debate**. On average, the share of the annual European budget allocated directly to energy policy in the 2007-13 financial perspectives is around 20 million euros. Until now this budget has only allowed the financing of feasibility studies for energy projects, and not the realisation of the projects themselves. But given the figures mentioned and the need for increased investment in infrastructure, along with new technologies and alternative energies, this amount seems decidedly low if the Union is to bring any added value to the financing of such projects. The share of the Community budget allocated to this issue in the new financial perspectives of 2014-19 should be significantly increased.

In general, the Union must above all **equip itself with a capacity to act collectively** in order to invest in energy transport networks and other infrastructure, to finance research programmes and to conduct a common policy with regard to producer countries and transit countries. **On these subjects, no added value comes from competition between Member States**. No country has an interest in financing alone the interconnections or the supply networks connecting with third-party countries – infrastructure which will serve several Member States. The resources necessary to conduct research leading to new sources of energy are too large for one Member State to mobilise – on the scale that the United States does, for example. The Union cannot accept that the supply of energy to a Member State be compromised. It must therefore ensure that solidarity can function, with the help of adequate interconnections, and that no third-party country can reduce supply in a targeted manner. The Commission has made proposals but **the difficulties of decision-making lead one to ask whether the Union has at its disposal today the necessary legal foundations to conduct such policies**.

III. WHAT STRATEGY FOR THE UNION?

In light of the current situation and to meet these major challenges, national solutions are no longer sufficient. It is now **crucial that Europe develop a common policy in the field of energy**.

Faced with these challenges, *Notre Europe* has begun a major research exercise on the future of European energy policy, and developed Jacques Delors's proposal for an **"Energy Treaty" to create a genuine European Energy Community**. To this end, a task force comprising high-level European experts has been assembled. The group has drawn up an overview of energy policies in the Union and is able to make recommendations in order to advance the Union towards more integration in this domain. Nonetheless, *Notre Europe* wanted firstly to consult the members of its *European Steering Committee* (ESC/CEO) on the feasibility of the project and its political and institutional framework.

This is matter firstly of analysing the possible progress within the framework of the current treaties and/or with the Treaty of Lisbon. The idea of **creating a new European treaty dedicated to the energy question** will then be developed. Finally, it will also be necessary to ask whether a partnership of a few Member States (as within the Schengen Treaty) could help advance energy policy around targeted objectives in the short and medium terms, and how this treaty could connect with the institutional architecture of the Union.

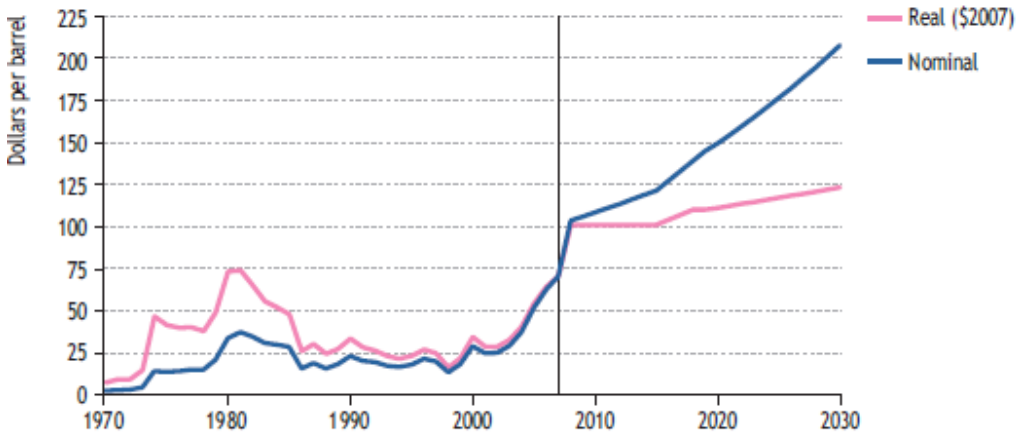
ANNEXE

1. Share of Energy Sources in Total Primary Energy in Europe

%	1990	2000	2005	2010	2020	2030
Solid fuels	27.3	18.8	17.7	17.2	17.4	16.7
Oil	37.9	38.0	36.7	36.4	35.7	35.3
Gas	17.9	23.0	24.6	24.9	25.7	25.7
Nuclear	12.3	14.2	14.2	13.2	11.3	10.3
Renewables	4.5	5.9	6.8	8.2	10.0	11.8

Source: DG TREN, Trends to 2030 - European Energy and Transport, 2007

2. Average IEA crude oil import price (annual data)



Source: World Energy Outlook 2008, IEA

3. Import Dependency of the European Union

Crude Oil Imports into the EU-27 (in Mio tonnes)

ORIGIN	2000	2001	2002	2003	2004	2005	2006	SHARE 2006 (%)
Russia	112.4	136.8	154.7	170.8	188.9	188.0	189.0	33.5
Norway	115.9	108.1	103.1	106.4	108.6	97.5	89.1	15.8
Libya	45.5	43.8	39.2	45.9	50.0	50.6	53.2	9.4
Saudi Arabia	65.1	57.5	53.1	61.5	64.5	60.7	50.9	9.0
Iran	35.5	31.4	25.9	34.7	35.9	35.4	36.4	6.4
Other, Middle East	54.7	48.3	43.2	27.8	28.5	30.0	32.1	5.7
Kazahkhstan	9.9	9.1	13.4	15.9	22.2	26.4	26.8	4.8
Nigeria	22.4	25.7	18.4	23.2	14.9	18.6	20.2	3.6
Other Origin	54.3	54.3	64.2	56.5	56.1	66.1	66.9	11.8
Total Imports	515.8	514.9	515.3	542.9	569.5	573.3	564.6	100.0
In Million barrels	3 765	3 759	3 761	3 963	4 158	4 185	4 121	

Gas Imports into the EU-27 (in TJ, terajoules)

ORIGIN	2000	2001	2002	2003	2004	2005	2006	SHARE 2006 (%)
Russia	4 539 709	4 421 515	4 554 744	4 895 252	4 951 044	4 952 879	4 927 552	42.0
Norway	1 985 231	2 136 379	2 601 569	2 699 473	2 801 723	2 671 779	2 844 269	24.2
Algeria	2 203 075	1 957 181	2 132 477	2 158 803	2 042 137	2 256 826	2 134 886	18.2
Nigeria	172 020	216 120	217 882	335 929	410 260	436 319	560 986	4.8
Libya	33 442	33 216	25 536	30 390	47 809	209 499	321 562	2.7
Egypt						202 419	317 420	2.7
Qatar	12 443	27 463	87 952	80 414	160 170	195 713	245 158	2.1
Trinidad and Tobago	36 334	24 498	19 120	1 365		29 673	154 244	1.3
Other Origin	112 810	199 256	125 425	100 023	313 245	409 387	223 232	1.9
Total Imports	9 095 064	9 015 628	9 764 705	10 301 649	10 726 388	11 364 494	11 729 309	100
In Mio Cubic meters	240 610	238 509	258 326	272 530	283 767	300 648	310 299	

Notes: Gross calorific value of 1 million cubic meter of Natural Gas can vary between 37.5 and 42.5 terajoule.

Source: DG TREN, EU energy and transport in figures, Statistical Pocketbook, 2009

4. Import Dependency (2006, in %)

	ALL FUELS	Solid Fuels	Oil	Gas
EU-27	53.8	41.1	83.7	60.8
EU-25	54.4	41.7	84.2	61.6
BE	77.9	96.3	100.8	100.2
BG	46.2	35.3	99.1	89.9
CZ	28.0	-16.1	96.6	104.5
DK	-36.8	93.6	-88.5	-103.3
DE	61.3	35.4	95.7	83.6
EE	33.5	-0.1	94.9	100.0
IE	90.9	70.4	101.5	89.8
EL	71.9	2.7	101.3	99.1
ES	81.4	75.6	100.8	101.3
FR	51.2	104.8	98.7	99.6
IT	86.8	99.7	92.5	91.2
CY	102.5	116.7	104.2	
LV	65.7	119.7	102.3	108.8
LT	64.0	94.6	97.7	101.0
LU	98.9	100.0	101.0	100.0
HU	62.5	39.2	78.0	82.2
MT				
NL	38.0	102.3	95.7	-61.6
AT	72.9	93.6	95.2	87.7
PL	19.9	-21.6	98.1	71.9
PT	83.1	105.6	98.1	100.6
RO	29.1	28.4	44.0	32.8
SI	52.1	20.1	97.8	99.6
SK	64.0	80.8	94.6	96.6

FI	54.6	61.7	100.4	100.0
SE	37.8	86.9	99.4	100.0
UK	21.3	75.5	8.9	11.8
HR	54.3	109.0	76.9	8.0
MK				
TR	72.5	51.1	94.0	96.9
IS	25.1	100.0	97.4	
NO	-773.8	-126.2	-1 472.9	-1 554.5
CH	57.3	95.0	100.4	100.0

Source: EU Energy and Transport in figures, DG TREN, 2009

5. Gross Inland Consumption (2006, Mtoe)

	ALL FUELS	Solid fuels	Oil	Natural gas	Nuclear	Renewables	Other (*)
EU-27	1 825.2	325.2	673.0	437.9	255.3	129.7	4.0
Share	100.0%	17.8%	36.9%	24.0%	14.0%	7.1%	0.2%
EU-25	1 763.8	308.8	657.0	420.4	248.9	123.8	4.9
Share	100.0%	17.5%	37.2%	23.8%	14.1%	7.0%	0.3%
BE	60.4	5.2	23.7	15.0	12.0	1.8	2.8
BG	20.5	7.0	5.1	2.9	5.0	1.1	-0.6
CZ	46.2	20.9	10.0	7.6	6.7	2.0	-1.0
DK	20.9	5.5	8.2	4.5		3.3	-0.6
DE	349.0	82.2	124.5	79.5	43.1	21.1	-1.4
EE	5.4	3.0	1.1	0.8		0.5	-0.1
IE	15.5	2.4	8.5	4.0		0.4	0.2
EL	31.5	8.4	18.2	2.7		1.8	0.4
ES	143.8	17.9	70.3	31.0	15.5	9.4	-0.3
FR	273.8	13.2	92.2	39.6	116.1	18.0	-5.4
IT	186.1	16.7	83.2	69.2		13.1	4.0
CY	2.6	0.0	2.5			0.1	0.0
LV	4.6	0.1	1.5	1.4		1.4	0.2
LT	8.4	0.3	2.7	2.5	2.2	0.8	0.0
LU	4.7	0.1	3.0	1.2		0.1	0.3
HU	27.8	3.1	7.8	11.5	3.5	1.3	0.6
MT	0.9		0.9				
NL	80.5	7.9	32.7	34.3	0.9	2.9	1.8
AT	34.1	4.0	14.4	7.5		7.3	0.9
PL	98.3	57.0	24.2	12.4		5.0	-0.4
PT	25.3	3.3	13.6	3.6		4.3	0.5
RO	40.9	9.5	10.9	14.6	1.5	4.8	-0.3
SI	7.3	1.6	2.7	0.9	1.4	0.8	0.0
SK	18.8	4.4	3.7	5.4	4.6	0.9	-0.2
FI	37.8	7.4	11.0	3.9	5.9	8.6	1.0
SE	50.3	2.7	14.1	0.9	17.3	14.8	0.6
UK	229.4	41.3	82.3	81.1	19.5	4.3	0.9
HR	9.0	0.6	4.6	2.4		0.9	0.5
MK							
TR	94.7	26.6	31.7	26.0		10.5	-0.1
IS	4.3	0.1	1.0			3.3	
NO	25.0	0.7	7.9	4.7		11.6	0.1
CH	28.1	0.2	12.9	2.7	7.2	4.6	0.5

Source: DG TREN, EU energy and transport in figures, 2009