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Energy Security of Supply:
Market and non market tools in a European policy

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***“Energy Security of Supply:
Market and non market tools in a European policy”***

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Introduction: *Energy security of supply and energy diversity in the EU*

Part I: *Markets as security of supply tools in the short run & the long run*

Part II: *Non market tools in short run & long run security of supply*

Part III: *“EU Security of Supply Policy Recommendations”*

Introduction

Energy security of supply and energy diversity in the EU

- 1/ At least since the European Council of Fall 2005 energy security of supply (SoS) is a major concern in the whole European Union. However we still actually see that we have no common European energy SoS policy and therefore “no single voice” in this very strategic area.
- 2/ The existing wide diversity of attitudes and behaviours towards a European energy SoS policy has deep objective foundations to be found into the very heterogeneous energy characteristics of the 27 Member States (MS). For example, along the last decades of the XXth century UK has been quite energy independent and self-supplied; Belgium extremely energy dependent while well supplied in the deeply interconnected North-West European energy market; while the new Baltic MS are today energy dependent, not connected with the rest of the EU and still enclosed into the oil, gas and electrical infrastructures of the former Soviet Union. The same diversity reigns in the energy mix. France literally would stop living if deprived tomorrow of its nuclear energy which is banned in Austria. Poland likes indigenous coal that Sweden ignores. Another diversity is seen in the industrial fabric. Germany has gas sumos but not oil ones while Netherlands and Italy have both.
- 3/ Furthermore energy SoS diversity exists in itself. It corresponds to the variety of energy security factors and security dimensions distinguishing the short run (time horizon for transitory disruptions, being technical or weather related accident, human error, abuse of market power like capacity withholding up to boycott or embargo) and the long run (time horizon for structural supply disequilibrium, like the ones IEA is still predicting in gas and oil).
- 4/ Therefore a noticeable diversity among EU Member States will ever exist. However many empirical warning calls have been received from India and China to Ukraine and lately

Georgia; from the Californian mess to the New-York/Toronto blackout, to the Italian and lately German-European blackouts; or from the UK Rough storage fire to the US Katarina-Rita storms. And many scientific or policy-oriented analyses (like the ones of the IEA) have shown that energy SoS is more and more a real concern which will stay on the EU agenda.

- 5/ It is why it is time for the EU and its 27 MS to define a common energy SoS policy. However do we have efficient tools to enhance SoS at the EU level? Are these possible SoS enhancing tools market based or non market based?

Part I

Markets as tools for security of supply tools in the short and the long run

I-I Markets as tools for security of supply in the short run

- 1/ Sellers in competitive markets usually gain from selling a variety of firmness of procurement adapted to the buyers preferences which means that the sellers will provide a variety of security of supply (from “firm” to “interruptible”; from “spot” to “long term”). Can then sellers contribute to managing short term supply disruptions? Yes of course: they respond to short term new scarcity by moving all flexible resources towards higher priority use. While markets can manage short term disruptions (= short term new scarcity) they do it at a cost. Actually at two “costs”. Firstly, markets need higher short term prices to reallocate flexible resources towards higher priority use. Second, such prices will be highly volatile because they are reflecting new fast changing scarcity and the new fast changing expectations about it.
- 2/ Can marketers abuse their market position to create “windfall profit” by creating artificial or lasting real short term scarcity? Yes: such typical market abuses are “*refusal to sell*”, “*capacity withholding*”, or “*embargo*”. However such abuses do not deal with SoS policy as such but with the competitive structures of the market, the regulatory oversight of that market, and the effectiveness of the competition policy and its competition remedies.
- 3/ Then are the creation of wider European markets (= larger cross-border exchanges) beneficial or detrimental to actual short term energy SoS? Wider European markets (= larger cross-border exchanges) obviously bring benefits that energy SoS policy cannot create otherwise. The wider the market is the smaller the short term disruptions are as compared to the sum of available flexible resources which can move fast to respond to any new scarcity at short notice. It is a basic “insurance effect” which can be called “resilience” or “liquidity” of

the bigger market. As a result energy SoS really has no rationale to fear wider markets: it benefits from and it welcomes market enlargement.

- 4/ However do these wider European markets need to be protected from short term “windfall profit” artificial scarcity created by “refusal to sell”, “capacity withholding”, or “embargo”? Yes. However like inside any Member State this EU concern does not deal with European SoS policy as such but with competitive structures of the markets, regulatory oversight of that markets, and effectiveness of the competition policy and competition remedies. You can look again at the DG COMP & DG TREN energy sector enquiry to have a relatively fresh view on this (2005-2006).
- 5/ Can then reasonably competitive markets deal with all types of short term disruptions and deliver all feasible short term energy SoS? No the markets cannot deliver all feasible short term energy SoS. At least for three reasons. Firstly, the markets react to short term disruptions by reallocating the existing flexible resources. However they can be short of flexible enough resources when facing very rare type or amount of short term disruptions. Second, the markets react because they are energized by the high incentives bring by volatile short term pricing. However the price increase needed to moving certain very scarce resources can be so high than political pressures will emerge to “cap” short term pricing and to *de facto* prohibit to calling these very scarce resources through the market. Thirdly, the markets react along the expectations market players make with the information each one of them can get and process. However short term markets can be short of certain “hidden information” the market players need to correctly anticipate and react to the actual “state of the world”.
- 6/ As a result even reasonably competitive markets cannot deal with all types of short term disruptions and deliver all feasible energy SoS. However the range of disruptions markets can deal with is very large. In the USA it went up to the Katarina and Rita hurricanes having shut down 20 % of the Gulf region gas capacity (= 5% US nationwide capacity).

I-II Markets as SoS tools in the long run

- 1/ We have just seen markets behave as short term SoS tools by using short term price moves to redirect flexible resources towards new provisional scarcity. How can markets be too long term SoS tools?
- 2/ Markets are long term SoS tools because they give incentives to suppliers to creating new resources by investing to benefit from the structural future scarcity they can expect.
- 3/ Can therefore competitive markets deal with all types of long term scarcity and deliver all feasible long term SoS? No, the markets cannot deliver all the range of feasible long term SoS for several reasons. Firstly, the market actors react to the long term scarcity they expect by investing in a certain new amount of capacity with a certain technology. However they can misevaluate the actual future capacity needed as well as the most appropriate technology for SoS, as both capacity and technology have to be predicted up to one decade in advance to the real world. Investment expectations are not pure science but real bet.
Second, the market players can avoid to picking the capacity or technology most SoS friendly because it will not fit with their own business model, or with their banker's or financial market business models. It can be so because: *of the uncertainty surrounding the future business or regulatory conditions; **of the actual risk profile borne by the SoS friendly investment decision; or ***the expected return from the SoS friendly investment decision.
- 4/ As a result reasonably competitive markets cannot deal with all types of long term hazards and spontaneously deliver 100% guaranteed LT energy SoS. However the range of long term investments markets can deal with is really large. In the gas industry we are seeing in the EU a very substantial surge of investment with LNG terminals or “peak-shaving” storages. In the nuclear industry we are seeing such a renaissance that market based financing nuclear is again a business possibility (even when construction costs are up 50% as compared to 4 years ago).
- 5/ This shows that when revenue expectations are high, project uncertainty seeming lower, financial business models being on line, market based investment can sustain very vigorous investment schemes and bring substantial contribution to long term SoS.

- 6/ However it is not inside the EU that we fear a lack of long term investment. Internal EU gas producers cannot deliver much more gas. It is outside the EU, in the upstream of the gas industry (notably the Russian gas industry) that forecasted investment is worrying as repeated by recurrent IEA -or CERA- studies and warning.
- 7/ One of the main drivers of the growth of gas consumption in the EU is the coming investment in electricity generation. Energy investors are then supposed to investing “too much” and not “too little”. Or “too little” in nuclear and “too much” in gas. In facts for many private investors the security of business projects seems actually much higher with gas than with nuclear.
- 8/ To put it shortly investors fear more their competitors’ choices than their country or the whole EU long run SoS fate. As long as they invest in the same line that their market they do not bear individual excessive risks for their investment (particularly for the technology they choose for their new electricity generation investment). Gas generation is still reasonably protected by the way wholesale electricity markets set wholesale prices. The only “real” competitor gas has there, as a generation technology, is coal –and not nuclear.

Part II

Non market tools in short run and long run security of supply

II-I Non markets tools in the short run

- 1/ Market are not perfect tools able to deal with all types of short term disruptions. Do we have efficient non market tools really able to supplement markets in dealing with short run issues? Yes, in facts, we have several of them nowadays.

- **2/** We know that markets have several types of shortfall when acting as short term SoS tools. Each of these deficiencies can be attenuated by non market tools as long as ... we are cautious of not damaging the corresponding market tool when supplementing it with a non market tool. If we damage a market SoS tool when creating a non market tool we shall have to turn to a deep cost / benefit analysis to know which net SoS result we will finally end up with.

- **3/** Markets can be short of flexible enough resources when facing very rare type or amount of short term disruptions. A typical non market tool is therefore to create “regulated” resources (storage facility notably; or curtailed load) dealing with rare types of disruption like “One case in fifty years” events (particularly extreme weather phenomenon). However this “very rare case” resource does not be used in less rare cases to aim keeping the short term price of market down when dealing with more frequent short term disruptions. Because such “seemingly smart” policy will then inevitably “crowd out” ordinary flexible resources the market uses and will finally not add enough ‘net’ new resources into the arsenal of SoS tools. Exactly the same can be said from “strategic resource” (notably storage) enabling to react to “embargo & boycott”. Of course to create regulated resources there is costly: it goes up to 10 to 15% of the annual consumption bill if a significant strategic storage is made. And you have to face that cost upfront, when creating the resource, instead of receiving bills from the short term market after using it. However that regulatory cost can be “hidden” from the public from various ways. One of the worst ways -as we have seen- would be to recover that cost by selling that strategic resource on the ordinary short term market for flexible resource.

- **4/** Markets can ask for so high short term price increase than political pressures will prohibit to using markets as tools. By “capping” short term prices public regulation limits the rent the flexible resources can get from short term markets in case of disruption. Such price capping is popular because public frequently hates to pay much more for the same commodity in rare events. However that price capping inevitably makes the market short of certain resources in very tight supply times. It is then tempting to put on the market the “strategic resources” formed to face very hard times. In Europe it will be one of the very dilemmas of “democratic SoS policy”. SoS policy can be used as a tool to redistribute resources among market players as much as to cure tensions and disruptions the market cannot reasonably deal with.

- **5/** European experts have to be civic there. As democracies are democratic systems with democratic political economy, the SoS policy will inevitably be permeable to certain redistributive aims. However both public authorities and public opinion have to face the naked truth: each step made to redistribute social welfare in the name of SoS policy is a step which will withhold certain flexible resources from the short term market which is a SoS mechanism. That move will not be a lethal harm done to SoS policy as long as these limited “democratic redistributive steps” are taken into account when calculating the net contribution of the overall SoS policy to the actual energy SoS improvement. Such “Democratic SoS measures” can be a toll to be paid in a democratic society to get a right to act on “pure” SoS policy. However paying a toll –as we all know- does not provide more cars or more fuel. To waist all the political will society has to act on energy SoS to paying democratic tolls everywhere up to the point of getting less resources would be a very bad SoS policy. Energy SoS policy will not be better off within any SoS politics. Blind SoS politics can even make it worse.

- **6/** Markets can be short of certain “hidden information” the players need to correctly react to the actual “state of the world”. That information imperfection can be improved by organizing the collect and the availability of such information through appropriate regulation. In the USA and Japan the actual level of overall gas storage is published every week. In Norway the level of water reservoirs and any generation plant outage has to be made public, etc. Market players can like or dislike that idea of information transparency, depending of their individual position in market deals because on any market “information is money”. However the social cost of badly informed markets calls here for suppressing the private money made that way. Particularly when we take into account the need of using markets to improve short term energy SoS.

- **7/** However short term energy market players for gas and electricity will never have “enough” sound available information and “enough” strong monetary incentives to deal with all the complexity and the speed constraints the gas and electricity systems operation actually faces in the short run. As a result, the very short term equilibrium of supply and demand (daily or hourly to real time) has to be managed by a “security officer”. Such officer is designated by a

public authority and has to stay neutral vis à vis any commercial interest in supply as well as in demand. This neutral security officer is known in competitive energy markets under the name of “*System Operator*”, currently “*TSO*” in European jargon (sometimes “*ISO*” or “*SO*” in the EU Third Package unbundling debate). We will not open here again the EU unbundling debate while we know it has a real SoS relevance (see www.Energypolicyblog.com a related web site). Everywhere TSOs are core agents in the management of the short term SoS, particularly with short term disruptions of all kinds.

- 8/ It does mean that TSOs can use “emergency commands” to get this or that from any registered market participant in this or that emergency condition. It does not mean that TSOs can obtain anything all along longer periods of time. Because “command and control” from TSOs does not bring any new resource into the system. It only moves the existing resources. In a longer period of time, all market participants will inevitably end reacting to the new economic conditions the TSOs create by issuing “emergency commands”. Basically TSOs have to use market friendly mechanisms if they want to run smoothly short term to very short term energy or capacity markets. Market unfriendly mechanisms can only be used here with care (as tools of very last resort). Of course TSOs can be given access to “security facilities”, “security resources”, “strategic tools”, etc. That does mean TSOs will then bring net new resources to respond to the new scarcity. However it has to stay under a rule of reason and under the responsibility of a higher level “SoS Authority” because of the many adverse consequences such a TSO move can have on the market forces and overall SoS outcome. All unreasonable decisions can very fast reduce the “size of the pie” which is the amount of flexible resources the TSOs can actually mobilize to face the disruptions having yet reduced the amount of available resources.
- 9/ In such a landscape, how responsibility should split there between Member States (MS) and the EU? A basic frame for short term energy markets, flexible resources, and TSOs’ operation is inevitably found at the Member States’ level. It counts on the national regulatory frame and the authority given to the National Regulatory Agencies (NRA) as well as with the overall SoS “sovereign” authority the Governments and Energy Ministries always have had in the EU.

- 10/ However to really benefit from the effect of the enlargement of European energy markets (which can pool a large basin of flexible resources to be mobilized on short term disruptions) all existing European resources are not to be kept by each MS only for its national disruptions. In the same vein, each MS should not offer its resources to others only with a deliberately too large “national sovereign security margin”.
- 11/ To say the truth, as short term SoS deals with the uncertainty of disruptions, solidarity among European MSs is not spontaneous. It can only stay unsatisfactory as long as a robust and credible European frame of energy markets and an energy solidarity mechanism are not built. This results in the “surprising” conclusion that achieving a really open, liquid, transparent and harmonized internal energy market is still one of the best SoS service Europeans MS can offer to themselves.
- 12/ Of course that market SoS tool has to be supplemented with an effective European “solidarity mechanism”. That solidarity mechanism cannot emerge on a voluntary basis. And the EU voluntary solidarity frame has not given any satisfactory outcome before or after the adoption of the existing EU “SOS Directive”. Therefore the European Commission has again to act as a better agent of the common interest of the sum of the MS.

II-II Non Markets tools in the long run

- 1/ Markets are not more perfect tools with all types of long term energy supply disequilibrium than they are with short term disruptions. Do we have efficient non market tools to supplement markets with long run issues? It seems we have several of them.
- 2/ Market players can misevaluate the actual future capacity needed as well as the most appropriate technology for SoS. If it is a matter of pure error and pure misunderstanding in the market place, Public Authorities and TSOs (still acting as security officers) can shed more light on the dark side of the road by realizing smart and “state of the art” forecast of supply equilibrium at certain time horizons. It is an extension of what TSOs have to do for themselves to “see” the future they have to be prepared to deal with to basing their own internal investment planning on. These studies can be periodically updated while relying on a

very open and transparent methodology to permit market players to really understand and use them. Sometimes these scenarios could have to be enlarged to less “robust” assumptions and less “business oriented” routines, up to include open technology options and non business decision making (as policy and regulatory options). Such investigation provides a type of “Energy outlook” like the ones IEA does and the EU should have but has not yet regularly done.

- **3/** However many market actors are frequently much more aware of their industry future than Public Authorities or TSOs will ever be. Then these players do not misevaluate their future. They just avoid picking the capacity or the technology most “SoS friendly” because it does not fit with existing business models (their own –it can differ from one company to the other; the one of their banker or the financial market). Investing only to improve “long term energy SoS” is only to reward the whole market or the whole society if it works well. Improving social welfare is something companies can do as long as they can expect to gain something with. As long as “society energy SoS” is mainly a large externality companies cannot internalize, it is unrealistic to expect they will voluntarily or largely invest on. The same goes with consumers by the way. We are not seeing crowds of industrial or domestic consumers voluntarily quitting their energy devices’ installed base to get long term SoS more friendly machinery. Furthermore determining five years to ten years in advance what will be the most “SoS friendly” capacity or technology is not a science. It is a kind of bet, like investment is. Betting on “Long Term SoS improvement” is typically a public decision with a public outcome. While “Picking the winners and the winning technology” frequently leads to errors because Public Authorities rarely have enough expertise and the right incentives to actually take the right long term decision.

- **4/** As a result the “non market tools” a Public Authority can use efficiently have frequently to be “market friendly” or “market compatible”. Public Authorities have to find means to induce existing markets to move by themselves towards public goals and public interest. It does not mean that no public authority can ever design any new public policy. Public authority can notably move market forces by: *reducing the uncertainty surrounding the future business or regulatory conditions; **changing the actual risk profile borne by the SoS friendly investment decision; or ***enhancing the expected return from the SoS friendly investment

decision.

- 5/ It leads to using several yet established policies like: accelerating the trends of technology change, or the speed of change of energy norms and standards. A smart technology push policy as well as a smart energy efficiency policy can reduce the uncertainty or the risk faced by market forces or raise their expected return in making more SoS friendly decisions. It is the underlying rationale base on which the “Strategic Technology Plan” of the EU is built. The same goes for the “energy efficiency push policy” which is a coming companion to the EU energy Third Package. It shows that first order non market tools for energy SoS are not necessarily labelled as direct SoS policy tools.
- 6/ A similar perspective is to be found with competition policy tools. Of course competition policy is an indispensable base to establishing robust markets in an energy sector having being monopolized or state-run for decades. However certain areas of competition policy are not yet crystal-clear to market forces because of the absence of court cases or Competition Authority decisions since the recent opening of energy markets. For example, will the Competition Policy treats the same or distinguishes different types of long term contracts permitting an industrial consumer to benefit from and therefore to encourage investment in generation technology more favourable to today’s long run SoS (like nuclear)? Symmetrically will Competition Authority permit a dominant nuclear company to invest into new nuclear facilities in joint ventures with competitors? Into a new nuclear facility selling its output to long term contracted consumers with or without “open season” to consumers or to other generators? With or without merchant lines tied to that nuclear plant? The way market forces can react to SoS properties of certain business decisions depends on the way various public policies actually treat such decisions.
- 7/ Among public policies being very influential on SoS policy outcome we find the network planning and investment policy. We should not worry about this because it is a regulated business which is supposed yet to be inherently submitted to the public interest. In real life we regrettably have to worry a lot. Of course TSOs are “security officers” of the networks (we will neglect here Distribution networks to shorten, while we know they are the primary network wind energy is connected to and interact with). However any security officer being

confronted with a phenomenon (“security”) which has so many different dimensions, with various possible measurements and alternative remedies, will inevitably reconstruct the security goals priority it can better deal with. If regulators (or Energy ministries) are not able to better define what energy SoS is made of and should be obtained with, and subsequently design the corresponding set of tasks and incentives, we should say that we have “security officers” and a certain “security output” while having no “security policy”. It is the more frequent situation all over the EU.

- 8/ National regulatory agencies (NRAs) do not have any clear, regular or basic duty to organize or to control or to contribute to energy SoS. The core task of NRAs is “only” to regulate the way network monopolies serve the infant energy markets. The ultimate goal of NRAs is the achievement of well functioning energy markets. In that sense they also serve the SoS policy: as a by-product of the market achievement. It is true it brings a valuable and irreplaceable contribution to SoS. However it is not sufficient. Particularly with long run SoS.

- 9/ TSOs themselves bring a valuable and irreplaceable contribution to SoS as they are the existing security officers being directly responsible for grid security and short term system operation. And it is fair to say that TSOs’ engineers really like doing their job of “network security engineers”. However their two basic security duties do not cover all dimensions of SoS. Even short term SoS is not entirely covered by the existing TSOs’ duties. TSOs operate the energy systems as given in their own respective security zones while trying to get these energy systems closer to each TSO’s perceived security priority. Energy security of “supply” in general is beyond the existing duty and business model of TSOs. TSOs are themselves companies. They are companies (well or badly) regulated and certainly not public servants or public officers. The behaviour and performance of TSOs depend of the way they are regulated, organized, owned and managed. None of these four dimensions of TSOs involvement in SoS policy has been yet confronted to a clearly defined SoS policy they should have to contribute to. Of course many TSOs’ managers (but not all) are actually irreplaceable experts in energy SoS policy but they still do not see why they will do it for free or why they should implement it at the cost of their companies. For them working according to the exiting TSO duty is enough for the time being.

- 10/ In that imperfect “public policy” frame what are the respective agendas of the Member States (MS) and the European institutions? Member States hold much more SoS keys than the EU. Many energy matters (notably the national energy mix) are still managed by the MS as “sovereign” affairs. It includes the Foreign Policy related to energy policy that we will treat latter on. Other SoS related areas (like grid planning and investment, energy balancing markets ruling, or emergency facility and storage) are managed or implemented under the subsidiary principle. The European Commission has no administrative body or agency able to implement European policy in each of the 27 MS: the EU is not the US which has powerful federal agencies managing the environment, the energy and the civil security. The EU is not there a “State”. It is merely a ruling committee which has no administrative arm to implement the ruling. As long as it deals with the internal energy SoS of each MS it is not worrying at all. Each MS will get the SoS it invests in and cares about. It is both democratic and efficient to let the administrative level directly faced with an externality (like security) to dealing with it.

- 11/ However this EU “benign neglect” principle becomes damaging to the EU as a whole as soon as it is related to the common energy SoS effect. An energy externality –security-affecting the whole EU is better treated at the EU level. It is because each MS left alone within a “voluntary contribution frame” will have incentives to free ride with its own costs of observance. While it can bet the others will not free ride as much and will permit to its free ride to benefit from the others’ obedience. Symmetrically, in blind retaliation, the others will not really open all their SoS reserves to each other. As a result all MS will lose something in this non cooperative SoS frame.

- 12/ The Third Energy Package is promising a more productive and responsible frame by organizing a set of European cooperation institutions (one for the regulators and one for the TSOs) and by making them responsible for the short term and the long term ruling of the European operation of the network (notably Grid Codes and Network investment planning). If it was possible to add energy SoS as one of the core duties and powers of both European cooperation institutions it should permit a future big leap forward. As MS will be kept involved in the oversight and approval of the production of regulatory rules by the Agency of Regulators (ACER), it can help to get (MS’ political will permitting) a channel to injecting

such ruling directly into the national related administrations (being national regulators or energy ministries or others).

- 13/ The European Commission directly manages other policies which contribute yet to European SoS. One is the Trans-European Network Policy which has an energy component recognizing ‘Security of Supply’ as one of its basic aims. TEN-E policy deals with investment projects corresponding to European network priorities studied by DG TREN and formally adopted by the European Council and the European Parliament as a joint regulatory decision named “TEN Guide Lines”. The budget and the work programme are yearly approved by a decision body which acts as a “comitology” committee where the 27 MS’ representatives vote under the EU “qualified majority”. The yearly budget is very small (20 to 25 millions Euros; less that the budget of one large European university) and does not weight much as compared to the 2 to 3 billions Euros invested each year by EU networks. But it leads to opening the doors of complementary European institutions and funds (incl. structural funds, and European Investment Bank) which make it influential. However that indirect influence has not permitted yet to achieve all the most important European priorities. It has resulted in 2007 –after a European council decision- into the designation of five energy “coordinators” for a short list of ultimate priorities including the first electrical connection of Baltic countries with the EU mainland network through Poland (apparently a success for this coordinator) and the Nabucco gas pipe project from Turkey to Austria (apparently less apparent success for that coordinator). The existing TEN-E European policy should play a much more decisive role in a coming European SoS overall policy if its policy content, budget, decision-making process and institutional frame within the EC and EU could be adapted to the large scale operation, fast track and responsive organization needed by an effective EU “security policy”. Among the many core points of reform and upgrading is the need of permanent and cooperative coordination between the DG RELEX, the DG TREN and the Council special representatives or tasks coordinators (like NESCOs). The EU institutions should learn to speaking “with one mouth” in hot spot places like Ukraine, Black Sea, Caucasus or Caspian Sea. It is to be reviewed by the EU this Fall.
- 14/ Quite the same should be said of the minimal gas security reserves provision created by the European SoS directive. It should play a much more decisive role in a European SoS

policy if its policy content and institutional frame could be adapted. A “low EU content” possibility is to update this mechanism and to link it to the IEA strategic reserve policy up to more or less merge the two within the IEA. A “higher EU content” possibility is to take advantage of the IEA recognized experience and to build a European gas strategic mechanism which would be the first big step of the EU in the actual management of its own energy future.

- 15/ Several other sets of European policies contribute to the European energy SoS and shall have to be considered in any coherent energy SoS policy. Unfortunately we cannot treat all of them in all their relevant details because they are related to the external policy of the European Union which is manifold. However ... “*knowing that gas dependence of the EU is not a threat for its energy SoS as long as it is not a threat for its SoS*” ... expresses what results of many debates inside the CESSA Forum (and its companion energy blog website) as well as outside. Everyone agrees that diversifying the energy mix inside the EU (up to more nuclear in countries willing to host it) is effective to very good as well as a policy improving energy efficiency. Of course these two policies (diversification from carbon and better efficiency) are also key contributors to the Climate Change policy: these two stones kill two birds

- 16/. However diversifying the external gas routes and suppliers is welcome with some caveat regarding the importance of the results it can bring.

Everyone agrees that EU is really sensible when promoting its internal energy market order by expanding the “*acquis communautaire*” in its neighbourhood through the “Energy Community”. While it is seen as a limited contribution to the EU SoS because key transit countries (like Ukraine and Turkey) or producers (like Norway) stay outside or not deeply inside as observers. It can change. It is not clear it really will.

It is even less clear if the Mediterranean policy (including the new *Union pour la Méditerranée*) will be as effective as announced and if it will ever end in a real common energy market shared by the EU and all other Mediterranean participants (notably the oil & gas producers like Algeria). Or if it will stay a half-empty recipient to host some deeper bilateral agreements like the “Memorandum of Understanding” with Egypt as gas exporter.

When it comes to Nabucco it is understood as a real EU network priority as expressed and

repeated by the TEN energy guide lines, the European Council, Parliament and Commission since several years. The nomination of an experienced diplomat and former Dutch minister as “Nabucco coordinator” has been very welcome too (while no results have been shown by the coordinator in 2008).

- .17/ However beyond these points the academic European energy community is more divided. Some European experts do not see Nabucco as more important than the North Stream and the South Stream gas pipe projects. A few see it as more hazardous and less important. It is mainly because Nabucco construction inside the EU does not give as granted its Turkish very long complement towards the Caspian countries (around 2 000 kms). Turkey itself does not clearly tell which transit regime it will really apply. On the top of this there is no guarantee enough gas will flow in it to bear its costs as to breed the EU internal market. An overwhelming majority of European academics do not see any alternative to the Russian gas. Not only today but also in the near or far future. Even on the Caspian shores they see a gas complementary but not substitutable to Russian supply. As a result they do not deny that EU is right acting towards a more diversified gas supply. They only think it will not bring results being large enough to substantially reduce the EU needs for much more Russian gas. They therefore fear the EU “dash for non-Russian gas” can be counter productive if it should end with less supplementary gas than the gas it could freeze on the Russian side. If Russia cooperates less and less with the EU as the EU enters deeper and deeper in its non-Russian supply external policy. It is fair to say it was the point of view of a part of the European academia in June 2008, two months before the Russian military coup in Georgia in August. We do not know what that community would think today after having seen a pretender to EU accession and a transit country for the BTC oil pipe (from Caspian sea to Turkey) being smashed with no real international presence on the Caucasian soil. What kind of cascading readjustments it will provoke on all sides of transit or producing countries around the Black Sea and the Caspian Sea, in the Caucasus and Central Asia, in Turkey, Qatar, or Algeria?
- 18/ More importantly European diplomats seem doubtful that all the EU countries will suddenly react as a single body while presuming they will speak for some times with one voice. Therefore the Georgian – Russian shock would act as a catalyst to reinforce the

European will to define a common European energy SoS policy.

- 19/ The opposite also is possible. Former oil shocks did not push the European countries to unite in the energy policy area while they did participate into the IEA creation and growth. The same can arrive again and the EU countries can be pushed by their inescapable energy diversity to harbour their differences under the umbrella of the IEA. IEA is itself a possible harbour for the Energy Charter secretariat which is half beheaded now, given the chilled future the EU could share with Russia.
- 20/ To really end we have to say that treating the OSCE and the NATO policy of the EU and of the EU countries is totally out of reach for this paper. While we all know it is half of the problem and half of the remedy. Energy security is again made closer to national and international security. Should we fear (as Clingendael did some weeks ago) it does not promise an easy and quick fix?

Part III

Provisional “EU Security of Supply Policy Recommendations”

I make the following recommendations to preparing a more consistent and more effective European energy security of supply policy.

III-1 First of all: Implementing the 3d Energy Package

First of all I would like to remember that the easiest and more effective way to start treating seriously the European energy SoS’ needs is a fast, full and cooperative implementation of the Third Energy Package (Please MSs do not wait five years more and two more EC injunctions to start implementing ... a few of the core pieces).

On the top of the coming 3d Package, I consider indispensable to add “direct” energy SoS tools which will help reinforcing the useful SoS dimensions that the 3d Package can already provide. I recommend five “market SoS tools” (mainly for the gas area because of its key position in short term EU SoS) and five “non market SoS tools” (of more general effect).

III-2 Recommendation of five gas market SoS tools

These measures will permit gas to actually flow across countries towards short term new needs. They can be designed and sometimes operated (like the EU transmission allocation mechanism) by the coming EN-TSO under the supervision of the coming EU regulatory body ACER and of the EC.

1- *Transparency of gas market operation*

To have weekly coherent and public statistics on each MS gas reserves.

2- *Harmonization and coordination of EU gas routes transmission capacity allocation mechanisms*

To create a gas “Single sky air control agency” being a joint subsidiary of all EU TSOs and being designed and managed by EN.TSO to offering an EU wide transparent mechanism to EU gas routes shipping and delivery.

3- *Reallocation in a secondary market of all unused EU routes and interconnection transmission capacity*

To implement the “Use it or lose it” principle to maximising the use of existing infrastructures.

4- *Harmonization of all MS short term cross-border trading regulations*

EU should have “No seams in the EU gas market operation”.

5- *EU harmonization and coordination of MS gas balancing markets and short term cross-borders balancing mechanisms*

To get an “EU single balancing operation scheme across interconnections”.

III-3 Recommendation of five non market SoS tools

The EU energy SoS requires non market tools because security has many dimensions market players cannot easily design, provide, or trade. However it is not an easy task for the “non market players”. Notably the construction of EU effective non market tools require a substantial effort of innovation and cooperation from the MS as well as a more pro-active and responsive organisation of decision making at the EU level. MS and EU cannot claim they want to act fast and deep and not creating the corresponding European new frame. European energy security is Europe, non Europe and world wide related. Energy security has to deal with security disruptions, tensions and crisis. EU SoS non market tools cannot be designed to become the slowest super tanker able to sail only on very calm European lakes in a quiet journey to implement a roadmap more or less updated every seven years.

1- Creation of an EU gas solidarity mechanism based on strategic gas reserves

Strategic reserves being storage or other means by which each MS brings 10% of its peak internal consumption. The solidarity mechanism is defined and operated by the EC under a “very fast track” regulatory codecision scheme. It combines a set of MS schemes and operational entities with an EU decision making head office where strategic analysis and strategic decisions are made (on the IEA model).

2- Refoundation of the “TransEuropeanNetwork” energy policy (TEN-E) as a “TransEuropean Energy Security and Solidarity Network”:

*to define a “European Security and Solidarity Priority” as a binding legal notion applicable to all existing EU regulation as well as the corresponding MS regulation, regulatory bodies, TSOs, and other administrative and legal entities;

**to design a new set of “European Energy Security and Solidarity Priority” routes, projects and facilities (in cooperation with EN-TSO, ACER and a new “fast track codecision” scheme); to assist the EU TSOs into creating a few “EU SoS Network joint venture companies” which will participate along with local TSOs into the conception, the financing, the construction and the board of a handful of projects of the “European Security and Solidarity Backbone” (like Nabucco);

*** to design a “*European Ultra Peripheral Energy Security and Solidarity Programme*” (targeting highly dependent and not interconnected countries like the Baltics; within a new “fast track codecision” scheme);

*** * to define the corresponding “*Energy SoS Technology Priority Programme*” (in cooperation with EN-TSO and ACER and a new “fast track codecision” scheme);

*** **to directly set and manage the yearly work programme and financial plan;

*** ***to host and assist the “*European Energy Security and Solidarity Priority Coordinators*” who will push the implementation of the ten top EU SoS priorities in the EU as well as outside the EU in permanent coordination with the external and neighbouring policy units, the NESCOs and the “EU special representatives” (in regions like Caucasus, Caspian Sea or Ukraine, all EC & Council bodies linked to EU energy security policy will speak “with one mouth”).

3- Creation of a “*European Energy Security and Solidarity Fund*” of 1 billion euros yearly

(2 euros / each EU citizen, or 1% of the overall European budget) to funding the “*TransEuropean Energy Security and Solidarity Network*” and its related “*Energy SoS Technology Priority*” under a “fast track codecision scheme”.

4- Creation of MS “*Energy Security and Solidarity Five Years Statement*”

Being national plans describing the energy SoS policy each MS voluntarily aims at implementing in the rolling coming five years.

Such plans will explicitly introduce “*Energy SoS*” as a duty and a competence of National Regulatory Agencies and TSOs and ask them to contribute to such plans. At the EU level “*Energy SoS*” will be introduced the same way as a duty and a competence for ACER and for EN-TSO.

5- Creation of a European Agency for Nuclear Security Cooperation

Assembling the existing MS nuclear security agencies (on the model of ACER in the 3d Package) and aiming at creating through cooperation a European level playing field both for:

*nuclear plant security and non proliferation design authorization

**and for nuclear plants operation control.

III-4 other recommendations

Apart from the ten core SoS recommendations, I would also like to recommend other useful improvements like:

▫ ***Transparent and user friendly “non-binding EU competition policy handbook”*** on the design and use of long term energy contracts by market players.

▫ ***Robust legal and regulatory regimes guiding nuclear investors:***

*to create joint ventures with other suppliers;

**to use “open season” mechanisms to booking their generating capacity to suppliers or to selling long term energy contracts to industrial consumers;

***to invest in merchant lines.

▫ ***Design and funding of an EU technology project on the long term management and storage of nuclear waste.***

III-5 Beyond direct energy SoS tools: the EU technology strategy and energy efficiency policy

To end I would like to repeat that it does not exist a single magic tool to easily and fast improve the EU energy SoS. Several key components of the EU overall energy policy are sensible and effective auxiliaries of the EU energy SoS. It is obviously the case with the strategic technology policy and the energy efficiency policy being both powerful and irreplaceable core pieces of any effective EU energy SoS policy.

Therefore it is only a constant and coordinated European effort which can substantially improve the EU SoS conditions. It is a long term multidimensional policy which covers more or less the whole spectrum of an EU energy policy. It will be as long term as the implementation of the internal market and with more dimensions to coordinate that the achievement of the internal market.

However within only two years (2008-2010) a smart and sound basis of the new EU SoS policy can be put in place. And within only five years the first big fruits could be harvested and a complete and very robust EU SoS foundation should be in operation.

The EU MSs have lost most of the five years since the EC Vice President L. de Palacio tried to convince them that energy SoS was the next core policy to enter in. We all know that the time consumed to get convinced is not wasted when it lately permits acting with actual speed, conviction and firmness. However no more time can be lost if the EU and its 27 MSs are willing to act and to get results.