

# *A Smart EU Energy Policy*

## *Conclusions and Recommendations*

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The Clingendael International Energy Programme (CIEP), the Loyola de Palacio Programme of the European University Institute, the Fondazione Eni Enrico Mattei (FEEM) and Wilton Park (WP) organised a four-tier program to discuss the potential for a smart EU Energy Policy. The program consisted of four workshops where academics discussed the various interactions between the three policy objectives with stakeholders from governments, regulators and the industry. The objective of the program was to come with a set of “smart” conclusions and recommendations for the 2010 EU policy review.

## I. Introduction

We are in desperate need of an EU Energy Policy. Outcries are coming from press reports, especially when something is happening (again) for instance with East-West gas flows. Apparently, the EU is either lacking such a policy, or it is not appropriately communicating about it. Or maybe another question comes up: is it smart enough? Facts are that, yes, the EU does have indeed an EU Energy Policy. It is a policy based on a vision, a vision with three components. The policy is aiming for “markets, competition and efficiency”, it is equally focussing on “a sustainable energy economy”, and thirdly it wants to “secure the EU’s energy supply”. From a historic point of view, one could even argue that finally after some 50 years since its inception, we have one, as the European Council agreed in the spring of 2007 on such a three-tier approach.

Formulating the policy is one thing. Starting to work on implementing paths, developing policy instruments and legislative frameworks is the next and more difficult one. For “the market”, a comprehensive 3<sup>rd</sup> Energy market package was developed. On “the climate” a comparably challenging Green Package was agreed upon. And on “supply security” a rather fragmented 2<sup>nd</sup> Strategic Energy Review was put on the table. In addition, the Commission has indicated that “the EU needs to begin preparing its energy future in the longer term” and that “the Commission will therefore propose to renew the Energy Policy for Europe in 2010 with a view to charting a policy agenda for 2030 and a vision for 2050, to be supported by a new Action Plan”.

Three objectives, three separate action lines. Balancing the three objectives in an integrated approach is challenging and difficult. To what extent is the market approach consistent with the other two policy packages? And by introducing a climate package with tradable emission rights and non-tradable targets for green energy, what impact does it have on the market designs for gas and electricity? Are the necessary investments in new pipes & wires for securing our energy supplies sufficiently coming under the prevailing regulatory framework? Or, to put it differently, are we smart enough in the way in which we are making implementation steps in order to meet our stated objectives?

## II. EU Energy Policy Reconsidered

It is useful to reflect briefly on EU energy policy per se before the outcomes of the three workshops are discussed and a number of recommendations for a smart EU Energy Policy are formulated.

EU energy policy is basically a basket of a number of policies that are concerned with energy markets and energy issues. It is not coming from the member states, nor did it come as an integrated concept from the Commission. It did not come from the energy sector either, a sector that traditionally is one of the most conservative ones in the EU. What the EU did agree upon in its 2007 Spring Council was the adoption of “three mantras” as a basis for a variety of policy and regulatory proposals and

actions. Three mantras, i.e. “Kyoto, Lisbon and Moscow”, cover the issues of climate change, competitiveness and supply security. Let’s look at them separately.

*On Kyoto, the green issue.* It was build upon the fact that energy related environmental issues became a truly European domain in the late 1980’s to fight acid rains and save migrant birds and fish. When Kyoto happened, the EU adopted it, as earlier attempts to start an EU carbon tax had failed dramatically. Two surprises came from the EU leaderships, one to transform Kyoto rather overnight into a market based system (i.e. the ETS), and another one, rather as “a gift from heaven”, to formulate political results with long term (i.e. burdening successors) non-binding common targets in the ‘Triple Twenties’ for 2020.

*On Lisbon, the market issue.* Lisbon was born in 1986 when the 1992 Project was created. The Single Act for the Internal Market became the core business for the EEC, the Economic Community. Market based economies with no internal barriers to trade and a centralized monitoring system to review progress and to solve on-going discrepancies. Energy was included in the plans, but brought very slow progress as national monopolies with their strong national government ties and behaviours (including with strategic national interests, rightly or wrongly) and many cross-subsidizations throughout value chains were starting battles with the UK market led by Thatcherite approaches. Two steps were made in 1990/91 on cross border transits in gas and electricity, followed in 1996/98 with the first liberalization package, gaining momentum in 2003 with a more comprehensive second one and a third one in 2009 that was probably not “singing the last song”.

*On Moscow, the security of supplies.* Russian energy (gas) supplies have played an increasingly important role for the EU since the early 1980’s. The peaceful dissolution of the Soviet empire gave opportunities for energy cooperation that were coming from some national capitals and hence not applauded in Brussels. How to react, without having a formal role? The foreign policy dimension was very political and energy was not on the radar screens. Selling the internal market paradigm to the East was then the Berlaymont reaction, which was not unsuccessful, except for Moscow. Opening the market was not in their interest, whereas maximising producer rents in the value chain was. Realizing that the Commission made several attempts from the 1960’s onwards to start “une politique communautaire d’approvisionnement énergétique”, including the severely defeated attempts by its VP Loyola de Palacio in 2003, the 2005 “winter energy panicking” in London and the 2006 Ukrainian gas crisis suddenly lead to the creation of an EU Energy Policy combining Kyoto, Lisbon and Moscow.

Looking now somewhat closer to the three cornerstones, Lisbon, Kyoto and Moscow, and their respective interrelations, we note the following.

### *II-a The Lisbon Dimension*

A competitive energy market asks per definition for pro-competitive regulation and pro-competitive industry structures. Although directives have been agreed upon and stringent compliance policy is developing with respect to national implementation, member states are free to go further than the requirements in the directives or to come up with further details and refinements. This is putting further pressures on the harmonization process as devils are always in the details. The same applies to the role of the NRA's (National Regulatory Authorities) that basically have a national focus, not always allowing a look at cross-border issues in the wider EU interest. The more concrete and important actions for border crossing are found in the EU Regulations. They are however still under control of the member states due to the time consuming and complicated Comitology-process with their qualified majority loading. Industry restructuring can only take place in the context of the EU's Competition Policy when M&As are on the table or when Competition Cases ("smoking guns") are at stake.

Lisbon and Moscow, yes, the Competitive Internal Energy Market is the core of the existing EU external SoS policy! There is no doubt on that. But beyond that statement there is silence, lacking concrete visions and strategies. Do we really believe that international open & friendly markets will deliver timely and sufficient upstream infrastructures to ship the gas we think we need? And how about LNG and terminals? And how about our internal needs for expanding infrastructures in gas and electricity, including the wider dimensions of "ring" concepts and super-grids? And therefore asking for a full rethink and an entirely redefined approach?

Similar thoughts are coming up for Lisbon and Kyoto, where we see already right now that heavily subsidized RES is complicating and even damaging grid operation and market operation. Will further massive RES-deployment more strongly pressurize the rest of the EU energy markets and grid management?

### *II-b The Kyoto Dimension*

The CO2 market needs to be tightened and the EU harmonised to be effective. This calls for a strong and centrally regulated EC-role, including effective monitoring and a centralized auctioning process. This is probably unfeasible (ok) with Member states (MS) comitology, as at least one argument relates to the fiscal sovereignty paradigm. Further calls for a carbon tax or even emission performance standards are adding to the debate. Massive RES requires strong effort to "squeeze" actual EU RES potentials, which can only deliver when there is open access to all EU RES-resources and an open and integrated EU RES market. Today's RES policy is still however 110% nationalized and politicized by national capitals. The 2020 three twenties require strong EU deployment of advanced low/zero carbon technologies. On the road towards "2050" strong innovation push & pull

programmes are necessary, not only requiring massive investments but more so stable and effective regulatory regimes.

Kyoto & Lisbon. Basically the CO<sub>2</sub> market is OK, but uncertainties remain as to the longer-term assurances of the price of carbon in relation to massive investment needs in RES, Energy Efficiency and low/zero carbon technologies. RES policy is anti-OK; national dreams prevail and are blindly subsidized, pushing efficient RES-deployment out of the market. Kyoto is frustrating Moscow as RES is discouraging upstream investment in gas that is still needed for decades to come. Supply security is therefore not well coordinated with demand security. RES and “clean development mechanisms” could be frankly used as a lever in EU foreign policy. Is that an option, and if so how?

### *II-c The Moscow dimension*

Our external SoS policy is focussed on “sinking” foreign economies in the large peaceful EU internal market. But what happens if foreigners do not jump in it? What is the EU’s reaction? Is there a “No policy” EU policy? EU External SoS policy has NO infrastructure development plan and NO energy long term contracting frame to make deals with foreigners. We are good in wording EU external policy, but lacking concrete means and instruments.

Moscow and Lisbon. No doubt that the EU external SoS policy is so internal market friendly! It is successful notably by suppressing gas destination clauses. But today the content is mainly “endless speeches” and the Commission cannot sign any energy contract. Having no clear vision on infrastructure development and long term contracting policy does not help the internal market. The EU SoS external policy cannot end in a “Nabucco only” game.

Moscow and Kyoto may be moving in the direction of making at least solar-RES and CDM as well as gas a core part of EU SoS with Mediterranean countries.

## **III. The First Workshop**

Discussion was held on the *internal energy market design and its consequences for energy supply security and climate change policies*. In three concluding sessions the workshop focused on:

1. The interaction of market design and cross border issues with the climate change policy components:
  - On ETS: a single exchange scheme all over Europe will remove an important part of the possible cross-border problems, but the resulting change of the merit-order might introduce changes in power flows due to differences in the energy mixes, making grid issues more salient.

- On RES: keeping the balance between exposing them to the market and protecting them from excessive market risks would allow their development in line with efficient balancing in the short run and efficient location in the long run.
  - On other low-carbon technologies: as there is no single technology policy, interdependencies through interconnected grids bring the risk that cross-subsidies can emerge with a consequence not only in economic transfer between countries but also, and more importantly, in efficient operation and investment in the power sector.
2. The interaction of market design and cross border issues with power supply security, generation investment and transmission infrastructures, with general consensus on:
- The theoretical superiority of day-ahead, intraday and real time nodal pricing for short run efficient scarcity and locational pricing. In the long run, indicative planning on generation adequacy and transmission developments are needed to help coordination of investments
  - The need and the role of long term contracts for efficient generation investment, but questions about the need for capacity markets are still unclear.
  - The existence of institutional obstacles for efficient cross border system balancing. Progress is however being made, including developments in the direction of a limited number of coordination centres, regional market couplings and coordination of power exchanges and wholesale markets. These developments could further result in European markets closer to pool models.
3. The interaction of market design and cross-border issues with “gas supply security”, gas imports, infrastructures and transits:
- There is an increasing need for more cross border transits in the gas network, which means either a higher rate of utilization or new gas network infrastructures. This infrastructure can bring high value to the gas system through the management of uncertainty, promoting competition and leading to a more efficient gas market.
  - Present remunerations for gas networks via systems of regulated tariffs are not giving the right incentives for further development. In addition, the duration of regulatory periods (3 to 5 years) are not adapted to investments with long-term lifespans.
  - ACER and the national regulators should create a framework where long term contracts for gas transmission can emerge with a limited size for entry-exit areas and with stability of tariffs as the best incentives for TSOs to invest.

## IV. The Second Workshop

A closer look was done at *the Green Package approach and its consequences for the internal energy market design and the implementation of the 2nd Strategic Energy Review*. In wrapping-up, notions were expressed that could be considered as useful inputs into the overall reporting on the project:

1. On renewable energy sources (RES), four issues could be mentioned:
  - There is a need to address new business models for TSO's, with its impacts on policy and regulatory agenda's.
  - The policies of "feed-in-tariffs" could generally be considered as success-stories, but some final "wait-and-see" views are expressed as well.
  - The development of a "green market" for electricity, such as Guarantee of Origin systems and Renewable Energy certification, is loaded with uncertainties and could be further explored.
  - There are huge potentials within the EU for the deployment of bio-energy and biofuels but an integrated policy is necessary linking agriculture, trade, energy and environment. The European policy umbrella on agriculture could be a strong advantage in promoting bio-energy.
2. On fuel mix, an EU-vision and strategy seems appropriate, but questions are raised about the viability of an overall EU-policy. Since many member states lack comprehensive policies on their national fuel mix, an integrated EU-policy seems to be out of reach. Looking at developments within national energy systems however, the role of natural gas seems to remain a key element.
3. On the Emissions Trading System (ETS), the point of no return has been passed, but more clarity is needed for the post-2012 longer-term framework. Especially from industry there is the message that ETS in its current form is insufficient to drive an energy transition and change the fuel mix in Europe. ETS as such is necessary but not sufficient as complementing policies would be needed such as a system of EPS (Emission Performance Standards).
4. On the European Agency for the Cooperation of Energy Regulators (ACER), the basic structure has been defined, although some question marks still remain. One of the key observations is that the successful implementation will strongly depend on the "regulatory behaviour" and cooperativeness of National Regulatory Authorities (NRAs). Second, the TSOs are quite active in using their early-mover's advantage to influence regulation through the European Network of Transmission System Operators for Electricity (ENTSO-E), established in December 2008.

5. On regional issues, more focus and attention on the development of regional markets seems to be necessary, including effective EU mechanisms on assuring coherence and consistency.

## V. The Third Workshop

*The Strategic Energy Review (SER) and its consequences for the internal energy market design and the Green Package policies* were elaborated and discussions brought the following views:

1. EU energy scenarios, security of supply and climate change and the EU future gas import requirements. European policy is risking sending mixed messages to gas producers. On the one hand they are asked to make the necessary longer term investments in gas, on the other hand are the Green Targets attempting to reduce gas demand. If investments are not being made and if the targets are not met, there is a risk for medium term supply crunches. Smart EU policy requires:
  - A more coherent and credible approach of its scenarios for consultations with producer countries and market participants.
2. The external energy dimension, the role of Russia and the Caspian Sea for EU gas supplies, requiring smart policies to be:
  - Producer focused, acknowledging that maturity of reserves is at the basis of any hydrocarbon value chain, with access to acreage and resources being a key concern and a challenge.
  - Providing an adaptive market based competitive framework for commercialization of gas that allows interface management between producer resource policies and the EU's internal energy market.
  - Providing an incentive based framework for phased transits and transportation, with project independency and focus on timely delivery of effective and transparent solutions.
3. Internal gas and electricity market designs, security of supply versus competition:
  - Integrate markets and enhance cross-border interconnections in gas and electricity infrastructures
  - Regulatory policies should promote investments in new infrastructures in gas and in electricity, including for storage and buffering
  - A common regulatory basis is needed for cross border interconnections, and ACER should get effective powers in order to contribute to the development of integrated EU energy markets.

4. The role of North Africa in terms of solar electricity supply to Europe, the Solar Plan and Desertec proposals:
  - Join and combine the two political/business initiatives
  - Create a beneficial political and regulatory framework, including the options for granting priority status under the EU infrastructure projects
  - Open EU feed-in regulations for power from the deserts
  - Explore public/private partnerships
  - Promote the development and operation of a European and trans-Mediterranean super-grid.
5. Smart EU Policies to promote CCS and nuclear:
  - A viable EU-wide emission trading system capable of delivering standardized carbon prices and/or an effective EU wide carbon tax
  - Nuclear power requiring local/political consents, with more specifically levelling the playing field for low-carbon technologies, guiding investor assurances in licensing procedures, and the exploration of regional centres for HLW-disposals and clearing the position of decommissioning funds.

## VI. The Concluding Seminar

During the concluding seminar, with the preceding in mind, discussions focused on a number of critical issues that came out of the three workshops on the respective pillars.

With respect to the **internal market** pillar, five key items were brought to the forefront that need to be further assessed and reconciled:

- The use of long-term contracting: it was noted that there is a barrier to market entry for newcomers, but these contracts are also essential for sharing risks throughout the value chain, particularly in the gas market, and in a sense do not differ from the long term feed-in-tariff systems for RES;
- The massive deployment of renewable energy: this will need a rebalancing of costs of related infrastructure (also to be paid by generators), suggesting to use nodal pricing arrangements; both TSOs and DSOs need incentives to contribute, and their role is set to change dramatically;
- The regional market initiatives: sufficient incentives are also needed for cross-border investments needed to support regional market integration; in addition market coupling,

regionally coordinated balancing markets for gas and electricity, the role of the energy exchanges and a more effective consistency mechanism are needed; the issue of TSO cost-sharing principles for cross border trade and transfers (such as the Inter-TSO Compensation mechanism for electricity) need to be finally solved;

- The role of the regulators: Will ACER, heralded as one of the strongest agencies ever created by the EU, make true on the “high expectations” put on it? As to guidelines and network codes, ACER is already lagging behind ENTSO-E with its expeditious work on guidelines and network codes;
- The necessary new investments in infrastructures: the Ten Year Network Development Plans from the ENTSO’s signify a milestone as a pan-European vision on the future of the two grids; but it also raises new questions:
  - Are the ENTSO’s becoming the ‘deputy director’ of network construction?
  - Is enough emphasis put on the question how to make the most cost-effective transmission infrastructure investments, cross-border and at national level, notably to accommodate more RES and enhancing (gas) supply security?
  - Will the focus remain on the consumer and on competition principles or is there a need for shifts towards supply security and sustainability?

The impact of the **Green Package** policies and related issues were identified in the second session:

- A general view held that current RES policy focuses too much on electricity while half of energy consumption does not go into power generation. Energy efficiency, heat storage and cooling, biofuels, solar thermal and combined-heat-and-power (CHP) are relatively neglected.
- RES will have major impacts on grids, not only for electricity but also for gas when gas becomes more and more the prime flexibility source for managing intermittencies (including consequences for gas storage and gas market designs).
- Smart grids and demand-side management are important initiatives, but in terms of time-scale and quantitative impact, will they match up against the intermittency issues expected from the European RES policy?
- ‘Bottom-up’ initiatives are crucial to meet sustainability objectives and top-down imposition might be counter-productive. If focusing on the objective of lowering emissions, there also appears to be a clear discrepancy between the price paid for reductions achieved in the RES domain and within ETS.

- ETS is functioning properly, but is so far only working to drive operational questions, not investment decisions. Uncertainty remains on longer-term carbon price developments. Yet introducing Emission Performance Standards (EPS) will interfere and take liquidity away from ETS, and thus quite contested.
- Green Package policies are supporting sustainable development supply security. Energy efficiency policies need to be much more focussed and strengthened. There is an industrial case as well, but what if China becomes a key supplier of solar PV and wind turbines? We should recognize that for some MS RES means just shifting dependency from one country to another.
- Governments should not pick low carbon “technology winners”; the case remains for coal with CCS and even more for nuclear on the European energy agenda.
- Complexity of combining RES policy with EU market principles remains a critical issue. Experience shows that RES success stories have been based largely on national promotional policy. But how can we achieve market integration and conceive RES trading if we cannot harmonize the national RES support schemes? NRA’s usually don’t have a role in RES.
- Is trade and cost-effectiveness what we want, or the best solution and technology in the long run? Massive volumes and long term subsidy schemes do not go together well and public authority should not pick winners. What if market failure persists and there is a risk of not meeting our RES goals? How can we solve the RES/market discrepancy with better policy?

Attention for the third pillar of **security of supply** has gained a new momentum with the Russia-Ukraine gas crises and oil price volatility and discussions concentrated on:

- Policy focus primarily on gas, but the EU is not able to provide demand security for its external suppliers. Policy and regulatory uncertainties, basically on gas-for-power, due to RES-policies and instruments and due to coal/CCS and nuclear energy.
- Similar uncertainties in Russia’s gas production. Russia needs huge investments to keep up current export levels, with production from current fields projected to be halved. EU is banker of Russia. Strong incentive to build Nabucco puts Russian gas in more competition. Gas glut for the next 3-5 years, the EU will have an easy ride as the US enjoys shale gas.
- How can we create a competitive market in Europe that will give more market rationale for our main suppliers? What price are we willing to pay for security of supply? How to shape the incentives for the necessary infrastructure and gas storage?
- Local situations and development should be taken into account for external projects, whether it is solar energy coming from North Africa or gas coming from Central Asia. Solar from Sahara meets primarily regional demand growth and supplies to the EU risks energy neo-colonialism.

- On gas, simply put, if Nabucco fails, diversification of supply is out of reach for Eastern Europe. Old and new MS are not in same position. The 2006 gas crisis took only 3 days, and the 2009 one 3 weeks and that made momentum. But who is going to pay for economically non-feasible pipelines and for energy security of others? On Nabucco: no hope to achieve diversification in E-Europe region if Nabucco fails.
- What is at the core of the EU-Russia relationship? Inter-dependency with Russia is OK, but Russia needs EU more than vice versa. The EU focus is on the consumer; in Russia it's the state. The first thing to do is restore confidence. Ukraine too big to fail and we might need to pay to stabilize it.
- Be smart on shaping foreign energy policy, as extending our internal principles will bring us only so far. Lisbon provides a step forward and new opportunities. On energy it implies a need for balancing top-down (political) and bottom-up (technical) approaches. But we need more transparency on bilateral deals. The EU is usually good at initiatives but not at selling them abroad. Be modest also as governments do not buy gas themselves.

## VII. Let's Go Smart:

### A New Vision and 22 Recommendations

Finally, based on a concluding session discussing a set of recommendations for a smart EU Energy Policy, the following results were formulated:

#### 1. A new vision

- **Develop a new integrated energy policy vision that moves beyond 2020.**
  - Consider policy-organizing principles such as a 2050 zero carbon objective for the overall EU energy mix.

#### 2. Integration & coordination

- **2-1 Enhance internal policy coordination & consistency with the internal market, the external supply dimension and the needs for the low/zero carbon transition process.**
  - Approach global energy issues in the wider context of the “energy/food/water” challenge.
  - Make integrated energy policy making within the Commission “Chef-Sache”, make it a single EP-committee responsibility and make it a single track in Council decision making.

- **2-2 Develop, in cooperation with the IEA, a comprehensive overall Energy Market monitoring system that reports regularly on everything for the EU relevant energy market developments.**
  - In line with the US EIA the EU should come with comprehensive bi-annual energy outlooks for the next 10-15 years in order to facilitate energy strategies for market parties and policy makers.
- **2-3 Develop a systematic review process for supply security standards.**
  - As there is no objective criterion in assessing “supply security” (as there are in climate issues and in competitiveness), make use of academic studies to start a discussion on it.

### **3. Energy Policy Governance**

- **3-1 Make adequate use of the new legal basis for comprehensive and integrated energy EU energy policymaking.**
- **3-2 Allow specific (regional) European energy policy making between member states that so wish, while preserving overall EU consistency.**
  - Examples of other policy areas could be useful, such as the euro-group, some Schengen-like arrangement, the Pentilateral Forum etc.

### **4. The Energy Efficiency Dimension**

- **4-1 Continue EU Action Plans and make them binding wherever effective.**
  - Labelling consumer goods such as large household appliances, lightning, tyres etc.
  - Policies for the building environment to regard inter alia efficient heating/cooling devices, energy efficiency norms and standards for houses, office buildings, apartments etc.
  - Facilitate and promote decentralised (r.e.s. and/or gas based) generation options, including aspects of system integration, infrastructures and governance (Smart City platforms).
- **4-2 Consider the development of white certificate market models at EU-level.**
  - Due account shall be taken of successful deployment in some Member States.
- **4-3 Consider the needs for an EU-policy approach on the deployment of smart metering and other demand side management measures for gas and electricity.**

- The relevant obligations emanating from the 2009 Gas- and Electricity Directives do need more precise interpretations.
- European and other platforms for Smart Metering to play a role whenever appropriate.
- **4-4 Develop a coherent vision and strategy for the mobility sectors.**
  - The role of electric vehicles especially based on low carbon energy sources in all segments of the transport sector to be assessed, including potentials, impacts such as on infrastructures and their operation and on scarce minerals and earth sources (lithium and others).
  - In addition, trains, boats and planes will have to be included as well.

## 5. *The Low-Carbon Dimension*

- **5-1 Strengthen the effectiveness of carbon emission mitigation mechanisms within the EU.**
  - ETS, being necessary but not sufficient, to be strengthened in its impacts on low carbon technology options, market transparency to be further enhanced and market monitoring to be effectively organized at EU-level.
  - Consider mechanisms for boosting investor confidence in stable long-term carbon price developments beyond 2020.
  - Emission performance standards for relevant point sources to be seen as a useful additional obligation to the ETS.
  - The introduction of a CCS-obligation for new coal plants to be commissioned by 2015, in order to boost a timely development of this technology.
- **5-2 Create a level playing field for all relevant low or zero carbon technology options for power generation.**
  - Review government support mechanisms, including innovation supporting feed-in tariffs, and make them technology non-discriminatory.
  - Consider separate Schengen-like mechanisms for nuclear energy technology deployment with due account for enhanced safety requirements.
  - Consider mechanisms for government guarantees for risky investments and government insurance schemes for unforeseen delays in licensing procedures, with a view to enhance long term investor assurances for all low carbon technologies and their enabling infrastructures.

- **5-3 Develop a more pro-active EU-role with regard to the development of nuclear energy in the fuel mix.**
  - Develop policy-arrangements for final disposal of high-level waste, including the option for shared facilities.
  - Promote full and open cooperation between national safety authorities on licensing new NPP's.
  - Develop a transparent and confidence-building policy on the independent management of waste and decommissioning funds.
  - Consider options for strengthening the role of the Euratom Supply Agency in the context of the forthcoming NPT review conference and other international fora for promoting nuclear fuel supply security under non-proliferation safeguards.
- **5-4 Develop a view on the EU fuel mix, without bypassing national sovereignties**
  - Such a view is needed as a basis for coordinating EU-funding for new technologies, including the SET-Plan.
  - Develop an EU-wide methodology and data exchange for planning new infrastructures (grids, grids), including at regional levels, on the basis of different energy technology scenarios.

## **6. The Infrastructure Dimension**

- **6-1 Re-regulate new internal cross border infrastructures (gas & electricity) and create incentives for new investment.**
  - Start a rethinking of prevailing regulatory designs for new infrastructures, in order to allow a more robust and cost-effective system with appropriate investor and user assurances.
  - The role of long term transmission contracts in this context will have to be enhanced, including options for customized practices taking due account of competition policy.
  - Develop a consistent and incentive EU frame for building and operating merchant lines as a further effective facilitator for market opening.
- **6-2 Develop a clear vision & road map for large-scale infrastructure expansions to accommodate large RES-based power generation in relation with a further expansion of demand side management smart metering and smart grid devices.**

- Such a Road Map should include the system operational impacts in an increasingly integrating market environment and a rethinking of the business models for the TSO's.

## **7. The Single Market Dimension**

- **7-1 Coordinate regional market integration**
  - Develop an effective EU mechanism to assure coherency and consistency all along the value chain down to balancing markets; such a mechanism should comprise a clear reference model together with effective political governance arrangements.
- **7-2 Be more explicit and robust on ACER, the new Agency for the Cooperation of Energy Regulators.**
  - ACER to allow organizing its explicit, effective and transparent role in relation to the various regional initiatives.
  - ACER to use as its prime objective the promotion of the development of a strong and reliable energy infrastructure.
  - Explore under the present regulation the possibilities for ACER to be more proactive in facilitating investor confidence for new energy infrastructures.
  - ACER should monitor the role of the energy exchanges in the management of cross-border interconnections.
  - ACER to be organized, located, and financed in such a way that it will become the final decision-making authority for the EU Network Codes.

## **8. The External Dimension**

- **8-1 Develop a consistent vision & strategy vis-a-vis external suppliers.**
  - On market access & reciprocity issues in order to create fair level playing fields.
  - On supply-demand dialogues, enhancing transparency and understandings on all drivers that are influencing future supply and demand developments.
- **8-2 Be smart with Russia.**
  - Develop an “all-energy partnership” approach on the basis of fairness and effectiveness, with mutual benefits and interests.
  - Consider a pragmatic rethink of the Energy Charter Treaty process, for instance by reconvening the Energy Charter Conference.
- **8-3 Be smart on “single voices”.**

- Organize “common voices” in a pragmatic way.
- Use the external trade paradigm by making a distinction between trade policy and trade promotion.
- Develop a coordination & information mechanism for bilateral actions, arrangements and contracts.
- **8-4 Facilitating external gas supplies.**
  - On infrastructures: Do not pick winners, but rethink regulatory approaches of the internal cross border impact.
  - On long-term arrangements: Consider demand-aggregating mechanisms (CDC, single buyer; but also consider response producers) and be smart on internal market competition versus external monopolies or cartels.
- **8-5 Seek global energy dialogues.**
  - With the Atlantic Basin, and in particular with the US, Canada and Brazil.
  - Enhance the existing EU-OPEC dialogue, focusing on technical issues and deepening understanding of global oil market developments.
  - With Asia, focusing on China, India, Japan and Korea, enhancing further global energy cooperation.