

# Annex 1. Review Electra Report

Using “traffic light” symbols, the implementation of the 20 recommendations of Electra is evaluated below, (green: implemented; orange: ongoing; red: no progress).

## Chapter 2: Energy efficiency and CO<sub>2</sub> reduction as drivers of innovation

Electra 1 saw energy efficiency as the main method for achieving the EU’s 2020 goals, by deploying technologies that are already available, delivering energy savings and, as a consequence, CO<sub>2</sub> emissions reductions. The chapter “Energy efficiency and CO<sub>2</sub> reduction as drivers of innovation” contained eight recommendations:

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1. The EU should refocus its policies more on developing growth and jobs through its programme for CO<sub>2</sub> reduction, including developing incentive schemes and policies other than the Emission Trading Schemes (ETS) to mobilise the economically attractive investment potential in the buildings, industry and other sectors.

*The EU has been working in several directions in this area, notably establishing the SET-Plan and preparing both the Energy Efficiency Plan 2011 (with a proposal for an energy efficiency directive) and a roadmap for building a competitive, low-carbon Europe by 2050, complemented by a low-carbon energy roadmap. Other initiatives concern the emissions trading directive, the NER300 financing instrument and the proposal for a new energy tax directive. Improvements that are required include the funding of the SET Plan and of the 2050 Roadmap (making more systematic use of ETS revenues, and taking advantage of the 2014-2020 financial perspectives), the need for a cautious and market-based use of financial instruments to foster energy saving measures, bearing in mind the international competitiveness of European industry.*



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2. Bringing about the perception that energy efficiency must be tackled everywhere, massive information and education campaign aiming at raising the general awareness of all actors – architects, contractors, and the general public – must be launched.

*While recognising that such campaigns have to be launched at the national level, several initiatives coordinated or supported by the European Union are worth noting: Sustainable Energy Week, the Covenant of Mayors and the setting up of a Smart Cities and Communities Initiative under the SET-Plan. Improvements required include better monitoring, consolidation and benchmarking of national initiatives at EU level, and the development of campaigns in the area of public acceptance of infrastructures.*



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3. Regulation must continue to support energy efficiency: in buildings and homes, to include the active energy part, in products and systems by progressively introducing appropriate minimum energy efficiency requirements, which evolve over time.

*Legislation has been enacted in a number of areas, such as the recast of the Energy Performance of Buildings Directive (although not covering all buildings and not establishing common evaluation methodologies throughout the EU), a proposal for an energy efficiency directive, the development of the eco-design directive programme (each new product should be carefully analysed by the Commission and industry jointly as binding eco-design requirements are not always the best option). Required improvements include the development of voluntary agreements (preferred to compulsory measures) on energy audits, on the deployment of ICT in energy intensive sectors and on energy management systems for large companies.*



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4. Ensure the leadership of public authorities with ambitious and visible investment plans in public infrastructures and buildings using, where appropriate, public-private financing to drive the investments.

*The European Commission tabled in 2009 a European Energy Programme for Recovery, with a €4 billion fund for investments in infrastructures, and presented in 2011 a Communication on energy infrastructure priorities followed by two legislative proposals (to simplify the permitting procedures and to allocate €9.1 billion from the 2014-2020 financial package). Improvements required include the need for public procurement to support innovation more strongly (as proposed in the flagship “Innovation Union”) and a careful approach to avoid new permitting procedures causing increased bureaucracy.*



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5. Foster R&D programmes, define technology roadmaps and an innovation policy to support early demonstration projects and maintain or create lead customer markets to foster early development and application of new technologies in Europe first: for instance, in e-health, automation, energy efficiency, renewable energy, and mega-cities.

*The European Union has taken major actions such as the SET-Plan and the development of the Lead Market Initiative, which need to be extended. Improvements required include the proper financing of the SET-Plan (as part of the 2014-2020 financial perspectives) and the Lead Markets Initiative being focused on such priorities as: e-Health, energy production and transportation (including smart grids), e-Mobility and transport infrastructures.*



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6. Develop benchmarking and the sharing of good practices, introducing Europe wide harmonised performance criteria or metrics for measuring energy efficiency for different sectors (energy passports / ratings for buildings, energy labels for consumer products).

*The EU is working towards the preparation of delegated acts and standard mandates for products in the framework of the directive on the energy performance of buildings, and on implementing measures for including further products in the Eco-design directive. Improvements required include the need to avoid additional, mandatory ecology footprint labelling, which is too complex, not yet supported by internationally accepted standards and could mislead consumers. Work should focus on systems and applications.*



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7. Set overall energy efficiency targets for each Member State and enforce national binding roadmaps and/ or action plans (e.g. the National Energy Efficiency Action Plans – NEEAPs under the Energy Services Directive) independently of the current energy mix, based on an exhaustive inventory of the current local environment and stimulating smart metering and intelligent power management.

*The 2009 third energy package, completed by a European Commission recommendation on ICT and a mandate for a standard, introduced a roll-out programme on smart meter deployment. The European Commission communication and mandate for a standard on smart grids are moving intelligent power management forward. Improvements required include the need to set overall and country-specific energy efficiency targets as they are increasingly important for allowing business to invest with more certainty.*



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8. Encourage investment and renovation with energy efficient products and systems, fostering replacement of obsolete, energy efficient products, closing down and replacing the least efficient installations and ensuring proper maintenance through launching long-term fiscal policies and financial incentive plans adapted to each sector.

*Most of the actions have to take place at Member State level. Improvements required include a request for more consistency and more long-term stability of the mechanisms put in place: in particular, fiscal and financial incentives policies have to be designed for a long-term period, and not suddenly changed without warning, as has recently occurred in several Member States on investments in renewable energies.*



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### **Chapter 3: Future technology made in Europe – generating more growth from innovation and investments in key European electrical engineering markets**

Electra 1 considered infrastructures as one of the largest drivers of growth for Europe, notably transportation and mobility, e-Health, energy (generation, transmission and distribution infrastructures), safety (civil protection, homeland security and defence), intelligent buildings, industrial processes (automation), and digital infrastructures (access to information).

The chapter “future technologies made in Europe” contained five recommendations:

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9. Modernise high-tech infrastructures in the EU, through fostering the development of EU lead customer markets, based on society trends and demand, improving the competitive environment and attracting both public and private funding and investment.

*The Flagship Initiative “A Digital Agenda for Europe” establishes the objective of providing access to the Internet at above 30 megabits/sec for the whole of Europe by 2020, and 50% of households having a 100 megabits/sec internet subscription. This objective is further described in the Commission communication on “European Broadband”, where the use of EU funds is promoted alongside private instruments. Moreover, the European Commission has presented the “Connecting Europe Facility”, a €50 billion financial instrument to invest in energy, transport and telecommunications infrastructures, coupled with a project bond initiative and a future reallocation of the EU structural funds. Improvements required include the need to incorporate the proposals into the 2014-2020 “financial perspectives” of the EU.*



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10. Initiate a number of lighthouse projects, similar to Galileo, such as the digital EU identity card and passport, EU electronic payment technology, an EU-wide high voltage direct current-grid, cross-EU high speed transport lines, EU-driven health and government and security solutions.

*In the framework of the EU European Economic Recovery Plan, of 2010 three public-private partnerships were launched on Green Cars, Factories of the Future and Energy Efficient Buildings, as well as an investment plan in broadband internet in rural areas. Improvements required include, when the Lead Markets Initiative is reviewed, the identification of new lead markets and combine demand-side policies with supply-side instruments.*



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11. Ensure stable and predictable regulatory framework conditions, especially at the levels of regulatory certainty and consistency for incentives and return on investment, to promote sustainable investment by customers in the energy infrastructure markets.

*One of the most difficult tasks for the EU institutions to achieve appears to be to establish a stable and predictable regulatory framework. The Flagship Initiative on An Integrated Industrial Policy proposes a competitiveness-proofing exercise on all legislation, first via the analysis on competitiveness via the current impact assessment process, and second via an ex-post evaluation. Improvements required include the Council and the European Parliament fully respecting the Inter-institutional Common Approach on Impact Assessment. Moreover, due to very severe budgetary constraints a number of Member States are sharply (and brutally) reducing incentives for the financing of energy efficiency or renewable energy technologies, with bad consequences for the development of entire industry sectors.*



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12. Set up a regulatory framework through smart regulation, stimulating investments, in for example new digital media (Digital Rights Management Systems, copy protection), and allocate frequencies for mobile broadcasting and HDTV in Europe.

*The Flagship Initiative "A Digital Agenda for Europe" fixes the objective of providing Internet access of above 30 megabits/sec for all Europe by 2020, and 50% of households having a 100 megabits/sec internet subscription. This objective is further described in the Commission communication on "European Broadband." Improvements required include actions in the areas of network security, e-Government, the completion of both the Digital Internal Market and the WTO Doha Round, and the expansion of the ITA.*



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13. With large investments needed in the EU to foster the integration of Europe, generate more growth through the use of regional funds to build high-tech infrastructure, by stimulating public-private partnerships, and by taking energy efficiency into account in public procurement through the use of voluntary and incentivised lead standards.

*The latest report on the Regional Funds, published end-2010, stresses that future funding should focus on a limited number of priorities, in line with the goals set by the Europe 2020 strategy for achieving "smart, sustainable and inclusive growth." The future overall architecture of the cohesion policy is under discussion as part of the 2014-2020 financial perspectives. For both digital and energy infrastructures, the use of EU funds is promoted alongside private instruments. Improvements required include further and better coordination between EU, national and private financial instruments.*



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## **Chapter 4: Operating the internal and export markets of the European electrical engineering industry: challenges in the areas of regulation, trade barriers and standards**

### **Framework conditions in the Internal Market**

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**Issue 1:** SMEs issues: reduce "red tape" – rationalise public procurement process to allow European SMEs to gain a greater share of public sector contracts.

*The Electra 2008 report included two requests for the improvement of the business environment of SMEs. Despite the steps taken in the right direction, these requests are still valid today: a) reduce "red tape" for innovative SME companies, so that more of their resources can be allocated to developing new products, and b) increase the share of SMEs in public procurement contracts by simplifying of the administrative process.*



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**Issue 2:** Improve EU educational and engineering base.

*In spite of the economic crisis, attracting sufficient skilled staff to engineering employment remains a challenge. This is an issue relating to both the attractiveness of the industry and the availability of suitably skilled staff.*



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**Issue 3:** Stimulate investment in the EU electrical and electronic application markets: energy efficiency, more capital investment by Member States, better investment conditions for venture capital and private equity and by combining investment requirements with privatisation of infrastructures.

*The European Council reiterated in February 2011 its determination to achieve the 2020 20% energy efficiency target, which is currently behind schedule because less than half the effort needed has been achieved.*



*Practical steps in the right direction were taken first through the recast of the Energy Performance of Buildings Directive and more recently with the proposal for an Energy Efficiency Directive. These now need to pass the legislative hurdle in the face of strong resistance by some Member States and sectors.*

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**Issue 4:** Mobilise the infrastructure market: with regard to transport, undue requirements on operators and technical standardisation of infrastructures – railways, power grids, medical equipment.

*Standardisation of infrastructures is still a painfully slow process in many areas, such as rail signalling and electrical grids. Not much progress is being made however due to financial support from the EU institutions supporting Trans European electrical and IC networks.*



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**Issue 5:** Support entrepreneurship through easing restructuring, fiscal incentives for risk-taking, ease cross-border operations including through the European Private Company (EPC) statute, and diminish the cost of failure for entrepreneurs.

*Real progress has been made in accelerating the set-up of companies and, in certain countries, for restructuring and making the cost of failure less.*



*On the other hand, progress on the EPC statute has been painfully slow.*

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**Issue 6:** Strengthen the capital markets.

*The European Commission has, and still is, preparing legislation aimed at reinforcing the financial system, the effects of which, at this time, do not seem conclusive as the euro and the financial markets lurch from crisis to crisis.*



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**Issue 7:** Faster technology transfer from R&D to innovation with a greater link between research and standardisation, IPR.

*For a long time Europe has been trailing in its focus on innovation and innovation funding: today, if we look at the share of public money being allocated respectively to basic research, to applied research and to development between the main economic blocks, we can see that Europe needs to make more effort.. Nevertheless the publication of Horizon 2020, the new multiannual R&D&I programme proposed by the European Commission for 2014-2020, with its focus on industrial competitiveness and innovation, definitely shows a determination to go in the right direction.*



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**Issue 8:** Start an-EU wide cluster-benchmarking initiative and use the European Institute of Technology as the brainpower-network for Europe's future.

*A European Clusters Advisory Group set up in 2009 by the European Commission presented a set of recommendations in September 2010 and their further follow up would be welcomed.*



*The European Institute of Innovation and Technology (EIT) was launched in March 2009, and initiated its three first Knowledge and Innovation Communities (KICs) in December, focusing on climate change mitigation and adaptation (Climate-KIC), sustainable energy (Inno-Energy KIC) and future information and communication society (EIT ICT Labs KIC).*

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## Challenges at the regulatory level

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**Issue 9:** Better regulation and market surveillance: essential requirements for efficient Europe-wide market surveillance, market surveillance programmes with common objectives, traceability of products and responsibility of the supply chain, coordination among national ministries.

*The New Legislative Framework entered into effect on 1<sup>st</sup> January 2010, followed by a programme of alignment of existing CE-marking directives to the new framework.*

*An important first step was to start, at the level of product legislation, a drive towards simpler and easier-to-understand product legislation that would match modern trade practices in an enlarged, richer, globally-open single market. The so-called alignment package, which will affect nine New Approach directives, is a welcome step in the right direction.*



*The issue of market surveillance, although high on industry's agenda, is however still lagging, with Member States not keen to reinforce their efforts in this area. In some cases Member States are reducing their budgets; this is clearly difficult for industry to accept and more real and practical support from the Commission and the European Parliament is essential in this area.*

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**Issue 10:** Ecodesign and environmental regulations.

*The first Electra report produced two basic requests, neither of which, in our view, have been met:*

- *First, a request for regulatory stability and predictability at the level of environmental regulation.*
- *Second, coherence in environmental regulation so that industry is not faced with competing and incompatible regulatory demands.*

*It is clear that the institutions are failing in this respect by:*

- *Turning each review into a further proposal for legislation thereby providing no regulatory stability.*
- *Undermining the coherence of the Ecodesign directive by continuously changing its scope, even though the existing directive provided the potential to adopt a clear and holistic approach to this area. Moreover, the proposed “revisiting “ of certain product categories by different directorate generals to pursue their own policy goals, will in the end undermine this instrument.*



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**Issue 11:** IPR: improved patent regulation, making the respect of IPR a key issue in trade negotiations, more vigorous political dialogue with priority countries and targeted market surveillance.

*The forthcoming adoption in enhanced cooperation of the unitary patent in the EU will be a very welcome step towards ending a long saga.*

*It must be clear that unitary patents will not bring significant benefits if their implementation is not adequately enforced by the public authorities through effective market surveillance aimed at catching counterfeit products.*



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**Issue 12:** Standardisation: fragmentation of standardisation activities in new areas and ensuring the future added values of standardisation.

*The recent standardisation package proposal does propose some changes, which will be beneficial to the users of standards, but the emphasis on integrating so-called “societal stakeholders” may well add another layer of complexity to the work of the European standardisation organisations. This could undermine the attractiveness of European standardisation compared to international standardisation.*



## Challenges faced in export markets

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**Issue 13:** China: CCC and enforcement of IPR.

*The importance of China to European engineering is still growing in many ways: as an export market, as an investment location, as a production site and as a competitor. In this context, the EU and China need to work together on the fundamental principles of open markets, on transparent, non-discriminatory regulation and on the respect by all for intellectual property. For European engineering companies, Chinese conformity assessment procedures, the Chinese standardisation system and the approach towards respect of IPR and its protection still constitute a significant challenge. Therefore more still needs to be done in this area to ensure that Europe is dealing with China on an equal level playing field.*



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**Issue 14:** USA: regulatory convergence, recognition of international standards.

*The tendency of the US and the EU to push for a stronger partnership is welcome, given the challenges faced by both parties in international markets. In practice, progress is proving excessively slow due to the very different regulatory systems in many areas.*



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**Issue 15:** Free Trade Agreements.

- **South Korea:** *the results of the adoption of the South Korea FTA still need to be analysed over time.*
- **India:** *the discussions on the FTA are progressing more slowly than expected and there are worrying signs that progress in the area of public procurement and lifting non-tariff barriers is too limited.*

