European Office

VDMA contribution to the contribution to the public consultation on the review of progress towards the 2020 energy efficiency objective and a 2030 energy efficiency framework

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A. Energy efficiency targets and measures

1. Do you think the right approach in addressing the shortfall is:

☐ a) To define energy efficiency target(s)
X b) Reinforced implementation of existing legislation, including active policy on infringements
☐ c) Proposing new legislation
X d) Other

VDMA[1] proposes to define an indicative EU corridor for energy efficiency until 2030. It should be mirrored by the development of individual national energy efficiency corridors in the framework of the proposed new governance structure. In order to create a coherent political framework, which allows for flexibility and a fair burden sharing between member states, indicative corridors for both energy efficiency and renewable energies would be more suitable than fixed targets. At the same time a clear development path for energy efficiency on the national level would be ensured with a view to accomplishing the CO_2 headline target.

1.a.1. How should these target(s) be expressed?

x In terms of energy intensity improvements of the economy and economic sectors
☐ As absolute energy savings (of primary energy usage)
☐ As a hybrid of the two represents a better benchmark upon which to frame a 2030 objective
☐ No opinion

1.a.2. At what level should they apply?

X EU X National ☐ Sectoral

1.a.3. Should they be:

☐ Legally binding X Indicative No opinion

Further comments on targets (maximum 1000 characters, = +/- 12 lines)

VDMA fully supports the Energy Efficiency Directive that establishes a common European framework for the promotion of energy efficiency. Fully implemented it would become an important instrument in achieving the 2020 efficiency goals. However, we raise concerns regarding the successful implementation of all measures prescribed in the Directive. So far it is difficult to assess the level of implementation. Thus, strict application of implementation deadlines should be observed and followed up by the Commission sending a clear message about the importance of the Directive. Otherwise, it is feared that Europe would indeed be likely

[1] The German Engineering Association (VDMA) is the largest European association of the capital goods industry with around 3,100 members, primarily medium-sized German and European companies. The sector in Germany has around 993,000 employees in total (January 2014) and generates revenues of €206 billion (2013).

to miss its energy efficiency objective for 2020. The 2014 review should in our view be the occasion to give a clear political signal in favour of energy efficiency so that Europe can stay on track for its 2050 energy and climate change objectives.

Given the clear benefits of energy efficiency beyond the contribution towards EU climate protection efforts, as confirmed by the International Energy Agency, such as to reduce energy bills and increase Europe´s security of supply through less dependence on energy imports, we believe that the Commission's proposal for a 2030 Framework clearly misses the opportunity to exploit these potentials for European consumers and European industries alike.

Therefore, VDMA calls for an indicative EU wide energy efficiency corridor that is mirrored on member state level by defining energy efficiency corridors in the framework of the new governance structure. Such corridors would be part of a consistent overall policy framework, defining as well corridors for renewable energies and a CO_2 headline target towards which the corridors are geared. This would allow for a balanced approach, giving flexibility to member states as to how to achieve the individual CO_2 target in the non-ETS sector while not neglecting the further development of the two key supportive pillars of the EU energy and climate policy framework, energy efficiency and renewable energies.

Moreover, member states should be asked to predefine a set of measures, which would be considered as policy options in case the development path should fall below the lower or the upper end of the corridor. This would introduce a coercive element into the policy structure in order to incentivise bottom-up initiative on member state level. After completing the iterative process with each member state, which defines the national contribution to the overall EU climate and energy strategy, ultimately, the Commission should have the power to enforce the new governance structure. This approach would provide the urgently needed political signal to promote energy efficiency, but also legal certainty and predictability for the European industry.

Please specify your response b) "Reinforced implementation of existing legislation, including active policy on infringements" (Maximum 1000 characters)

The Commission should pursue that all existing Directives on the roll out of energy efficiency are actually implemented on the national level, especially the EED, the Energy Performance of Buildings Directive, the national programmes for the roll out of smart meters as well as the Ecodesign and Energy Labelling measures.

In addition, we urge regulators to improve consistency and coherence of the above-mentioned pieces of legislation promoting energy efficiency, but also beyond, since it impacts industry competitiveness. The ever more complex body of EU legislation is increasingly of concern, especially for integrated multifunctional products, which may be subject to several inconsistent or even contradictory regulations. The Ecodesign and Energy Labelling Directives are generally coherent and work well together in addressing the energy efficiency aspects of energy using products. However, other pieces of EU environmental legislation are acting in isolation, such as substance restrictions under RoHS and/or REACH, which increasingly interfere with energy

efficiency requirements of products. We call for setting clear political priorities considering that different environmental parameters can influence and also conflict with each other as well as a consistent implementation of the given regulatory objective throughout EU regulations.

Finally, appropriate resources should be provided at the level of the Member States to ensure effective enforcement and market surveillance of existing legislation. National market surveillance authorities are in charge of controlling that products circulating on the EU market fulfil the minimum legal requirements. This concerns safety regulation as well as efficiency regulation such as the Ecodesign Directive. It is important to strengthen the resources of market surveillance in order to allow for an effective enforcement. However, new rules specifically for market surveillance on energy efficient products are not necessary as an effective horizontal legal framework on market surveillance already exists, namely Regulation 765/2008. Implementing the available tools fully would bring a significant gain. The information exchange mechanism ICSMS is currently not used to its full potential. A modular extension would be helpful to facilitate its application.

Please specify your response c)
No answer foreseen

Please specify your response d)
No answer foreseen

B. Energy efficiency sectors

2. Do you think that further policy measures are needed at EU level to foster energy efficiency in buildings?

☐ Yes X No ☐ No opinion

Please give details. (Maximum 1000 characters)

It is necessary to implement the existing measures consequently on national level. Considering that nearly 40% of the EU final energy consumption occurs in buildings2 and the sector offers significant potential for energy savings, improving the energy efficiency of buildings appears of utmost necessity for putting the EU´s energy and climate change targets into practice.

To reach the EU-2050-targets it is necessary to consider the different types and usages of the existing buildings while reviewing the EPBD and EED. The difference in owner structure and therefore in investment patterns between residential and non-residential buildings (e.g. health, education, culture and industry) makes it difficult to apply one solution for the whole existing building stock.

We believe that the Energy Performance of Buildings Directive is the appropriate legislative framework to tackle the energy efficiency aspects of buildings and technical building systems. However, a revision is necessary to better address existing buildings. Considering that over 80% of existing buildings will still exist in

[2] *Energy Efficiency Plan 2011*, European Commission, March 2011

2020, the refurbishment of all existing buildings, including technical installations and internal equipment, should therefore be the top priority. The concept of 'deep renovation', however, does not fit to every building and its type. Energy efficiency can be significantly increased by small and/or single actions of renovation, too.
We set some principles to be considered for addressing efficiency of existing buildings:

- Set up a clear and simple target for all buildings according to the type, usage, surrounding, etc. of building.
- Foster the use, the metering and monitoring of actual energy consumption and other parameters, such as temperature and indoor air quality.
- Take into consideration the building as a whole and in its overall environment: it should be considered as a key element of smart cities in interaction with smart energy infrastructures or in interaction with industrial production processes, especially where heating and cooling is involved.
- Foster deployment of energy efficient equipment and technologies in buildings.
- In addition, foster the implementation of efficiency increasing single actions/measures of renovation instead of only fostering 'deep renovation' that often is too expensive especially in terms of residential buildings and their owner structure.

3. Do you think that further policy measures are needed at EU level to foster energy efficiency in industry?

☐ Yes X No ☐ No opinion

Please give details. (Maximum 1000 characters)

It is the core business of VDMA member companies to provide ever more sustainable and energy efficient equipment to other energy-using industries (such as chemical, automotive or food) to better manage their energy consumption

To fully explore the overall saving potential, industry needs to address energy efficiency as a strategic management decision in a systemic and holistic way (energy management systems). ISO 14001 and 50001 series as well as the EU project EMAS are valuable tools available to companies. Often their implementation is linked to governmental agreements for energy / eco tax rebates ('Spitzenausgleich' in Germany). There is no need for additional initiatives in the area of management systems or footprinting on an organisational level.

High energy savings can be achieved in production processes. Depending on the process a systems approach can achieve high energy savings.

- Better use of industrial energy and waste heat recovery, better use of waste as a resource (heat, energy, raw material…)
- Deployment of efficient components (e. g. electric motors); retrofitting should be used as a chance to address the problem of oversized components which is a large potential for energy savings.
- Optimising energy consumption through appropriate automation and control (allow processes and machines to regulate themselves to better manage

various power flows: electric, gas, water), monitoring systems and maintenance.

- Better information / awareness of energy end-user and the whole business chain (architects, engineers, auditors, installers) to foster installation and use of ever more energy efficient solutions in industry; better information by means of cost-efficiency studies or life-cycle cost calculations
- Better integration of industry in a modernised EU energy system with demand-side flexibility and smart grids.

We need a better market uptake of existing efficient technologies that are already available. However, seeing that the EED has not been fully implemented, it is not the right time to suggest new measures. After the effects of the implemented measures have fully unfolded an assessment regarding the necessity of new measures would be more appropriate.

As for the period after 2020, VDMA suggests to establish, within the framework of the proposed new governance structure, national corridors for energy efficiency which are linked to concrete policy instruments. By predefining the instruments to be chosen in case of falling below the lower or upper end of the predefined corridor, member states would be incentivised to act in order to stay within the corridor and to avoid EU policy measures. As the contribution to the overall EU corridor needs to be coherent, cooperation among member states would also be incentivised by the corridor approach in order to ensure that the overall path to 2030 is maintained.

4. Do you think that further policy measures are needed at EU level to foster energy efficiency in transport?

☐ Yes ☐ No X No opinion

5. Do you think that further policy measures are needed at EU level to foster energy efficiency in electrical equipment?

☐ Yes X No ☐ No opinion

Please give details. (Maximum 1000 characters)

It is the core business of VDMA member companies to provide ever more sustainable and energy efficient products and technologies to other energy-using industries (such as chemical, automotive or food) as well as to private consumers to better manage their energy consumption.

Aiming at removing least energy efficient products from the market, the Eco-design Directive together with its ongoing implementation on some 46 different products of our industries is a milestone for the realisation of the EU energy efficiency policy. In addition, it is complemented by the Energy labelling Directive that rewards best performing products on the market. Given the existing EU legislative framework, we do not believe that any further policy measure is necessary. However, its implementation might be improved (as highlighted in the two review studies carried out by ECOFYS and CSES).

Much has already been done by the mechanical engineering industry to increase efficiency of components. However, there are still improvements potentials through a better market uptake of technologies and a better exploitation of energy savings at the system level. While efficiency increases on product level are often reaching their technical limits, appropriate system engineering often result in much bigger efficiency gains. However, we see practical limits for targeting components that go into systems under the Ecodesign Directive, despite their efficiency potentials, considering the necessary practicability, measurability and simplicity.

In order to better address the efficiency potential of B2B products within the ecodesign framework, VDMA urges the Commission to revert to the option of setting generic requirements and developing product-specific standards. Many complex products of the capital goods sector have differing applications and as a result no constant operating point so that specific energy efficiency requirements can often not be determined (e.g. machine tools). They require a different approach.

6. Do you think that further policy measures are needed at EU level to foster energy efficiency in generation and distribution?

☐ Yes X No ☐ No opinion

Please give details. (Maximum 1000 characters)

The current regulatory framework in many Member States and varying political support do not create consistent conditions for developing a fully integrated energy system in Europe, which will be sufficiently flexible to deal not only with immediate requirements due to the change in energy mix, but will offer sufficient possibilities for innovative applications in the future. It is of utmost importance, in our view, to create a flexible and intelligent energy system, which will deliver a high level of security of supply, efficiently integrate a high share of sustainable technologies, especially on the conversion side, e.g.: wind power, solar panels, biomass, electric-vehicles, heat pumps, storage, and also offers the means for each end user to efficiently manage the energy conversion in terms of CO2 emissions and cost.

Identified needs:

- Create a pan European electricity grid for the future that is capable of interconnecting and integrating large-scale energy streams from a variety of energy sources
- Establishing competitive production of highly efficient energy storage (with technologies such as pump storage hydro power, batteries in electric vehicles, stationary battery storage solutions etc.)
- Support demand response to reduce demand and optimise the energy system
- Improve energy efficiency in power generation (equipment upgrade, further use of combined heat and power technologies)
- Improve energy efficiency in distribution & transmission equipment (deployment of efficient equipment, such as transformers)
- Create a level playing field for flexibility and efficiency in the fields of generation, energy storage and demand side management

7. Do you think that further financial mechanisms and instruments are needed at EU level to mobilise energy efficiency investments?

X Yes ☐ No ☐ No opinion

Please give details. (Maximum 1000 characters)

The declining balance method or at least tax incentives would incentivise investments in energy efficiency measures in industry, commerce and buildings. Energy-efficient individual measures should be recognised as worthy of funding.

A main barrier to investments in energy efficiency is that companies prefer to invest in their core business, e.g. R&D for new products etc. Most of the time, increasing energy efficiency of the production process or the buildings is a secondary objective. In addition, companies make investments decisions by evaluating the pay-back (mostly less than 3 years) rather than life-cycle costs. Therefore, new financing models are needed that make it possible in general to invest in energy efficiency even though the pay-back period (ROI) is over 3 years and/or make real future efficiency yields effective on cash and liquidity in the present. The companies are given a loan, which pays an advance on the expected additional yield from energy savings as a result of the investment beyond the investment costs. By increasing the liquidity of the company, investments in energy efficiency become a strategic focus for the company management.

Existing funding programmes are very complex and difficult to access especially for SMEs (multitude of programmes, difficult application process etc.) The programmes should be streamlined so that companies can make better use of it. The EU could have a role in coordinating member state efforts and in providing an overview to companies which opportunities exist across borders. In addition, The EU could have a role in streamlining or putting in place alternative financing models.

8. Do you think that further measures are needed to build the capacity of actors in the energy efficiency sector?

X Yes ☐ No ☐ No opinion

With regards to more information learning networks such as energy efficiency networks can make a further contribution. The facilitated exchange of experience offers companies the chance to network, share best practices and obtain information from qualified energy consultants. Existing networks in Germany demonstrate that companies save 50% more energy when participating in such networks ('30 Pilot-Netzwerke' of the Ministry of Environment – BMUB - http://www.30pilot-netzwerke.de/nw-de/)

Trust in consulting services with high standards of quality needs to be reinforced. The term 'energy consultant' is not yet protected and thus there are no diligent quality controls implemented in the consulting market. From the perspective of VDMA, the requirement for technical competence and reliability in consulting and thus for trust on the part of plant operators is to establish uniform and demanding quality standards for the training of energy consultants and internal and external auditors.

These quality standards should be developed by all stakeholders, including the manufacturers. A European quality standard is desirable. If, during the course of consulting, the identified energy saving potential cannot be reached, customers should be able to insist on improvements or be compensated for the decrease in value.

9. What are the most promising technology solutions that can help deliver energy savings in the 2020 and 2030 time horizon? How can their development and uptake be supported at EU level? (Maximum 1000 characters)

No single promising technology will address all aspects of energy efficiency; instead, a mix of technologies will be necessary. However, we believe that any specific technology solutions should not be favoured according to the principle of technology neutrality. We must remain open towards emerging technologies, since pre-selecting technologies on basis of today's knowledge risk hampering industry innovation.

Therefore, we set the following principles:

- Tools and mechanisms to support development and uptake of promising technology solutions should be technology-neutral and focus on results
- There should be no targeted subsidies / grants for demo projects and first-time use
- There should be increased emphasis on pre-competitive industrial community research

Investments in research on energy efficient technologies, especially in the field of production technologies, should be increased. National and European programmes advance
practical application-oriented research. VDMA's experiences with networks such as the "*Effizienzfabrik"* (Efficiency Factory) or the collaborative industrial research (IGF) are excellent

10. Further comments (maximum 1000 characters)

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