Comments of PU Europe
on the Energy Efficiency Plan 2011
Commission Communication COM(2011) 109 final

PU Europe is the European association representing the polyurethane insulation industry (PUR/PIR). Polyurethane is a premium insulation material used in a wide variety of applications in buildings, district heating, cooling and refrigeration, and industrial systems.

PU Europe has taken note of the Energy Efficiency Plan 2011. This Plan comes at a crucial moment in time, as today's decisions determine whether Europe will achieve its CO_2 emission reduction targets for 2050. PU Europe is concerned that the Plan only partially responds to the scope of the challenge as it remains too vague and non-binding in a number of respects.

Detailed comments per chapter:

1. A NEW PLAN FOR ENERGY EFFICIENCY

PU Europe supports the integration of this plan in the Flagship Initiative for a Resource Efficient Europe to ensure consistency in the overall approach. In doing so, it must be ensured, that the holistic approach to the building efficiency is maintained and existing performance indicators as developed under the Energy Performance of Buildings Directive (EPBD) and CEN/TC350 (Sustainability of buildings) are used. There is significant concern in the construction industry that new initiatives such as eco-design, energy labelling, eco-labelling and ecological footprint develop new sets of indicators which lead to significant extra costs for industry without increasing the building's life cycle performance.

PU Europe doubts that this Plan will achieve the goal of saving up to 1000 Euro per household and year and creates up to 2 million jobs. Too many proposals remain vague and without clear and measurable targets.

In particular, the plan fails to set clear targets for Europe's 168 million existing privately owned buildings[1], although they offer by far the largest cost-effective savings potential. The proposal to check the state of progress in 2013 and, if required, to set binding targets at that point in time, will make it impossible for the construction industry to deliver by 2020 for the following reasons:

- One can expect that one to two more years would be necessary to agree on measurement methods and national targets for the buildings sector. Hence, binding targets would be unlikely to apply before 2015.
- The construction supply chain is extremely fragmented consisting of micro-enterprises for more than 90%. It will take time to bring them all on track to ensure delivery of the target.
- The number of skilled construction workers would need to be increasing significantly. In many countries, vocational training requires courses two to three years of courses. Hence additional skilled workers might not be available before 2018.

[1] Excluding publicly owned social housing. See" The Fundamental Importance of Buildings in Future EU Energy Saving Policies", E[2]APT, July 2010

FEDERATION OF EUROPEAN RIGID POLYURETHANE FOAM ASSOCIATIONS
Av. E. Van Nieuwenhuyse 6 • B-1160 Brussels
T +32 2 676 73 52 • F +32 2 676 74 79 • TVA BE 0870 426 629
www.pu-europe.eu • secretariat@pu-europe.eu

PU Europe could support stringent binding measures for the building sector without binding national targets as a leading principle. It is however evident that most of the Plan is neither stringent nor binding and progress will be very difficult to measure.

2. PUBLIC SECTOR: LEADING BY EXAMPLE:

Renovation of public buildings

PU Europe fully supports the proposals under this heading. It should be noted that information on renovation remains very patchy in terms of rates, improvement of energy efficiency levels and comparability of data. PU Europe is co-sponsoring a BPIE study[2] which should provide more details by summer 2011.

The proposal that each refurbishment should bring the building up to the level of the best 10% of the national building stock may lead to undesired results. Member States having already started ambitious energy efficiency policies years ago, will have highly efficient top performers. In countries without such policies, the 10% top performers will still have low efficiency levels. Bringing buildings to this level would lead to lock-in effects as buildings may not undergo deep renovation again before 2050.

Furthermore, from a mathematical point of view, if buildings are brought to the 10% top performers, the top level would not really change over the years. Consequently, the full savings potential of public buildings would not be realised by 2050.

PU Europe would recommend that the Energy Performance Certificate should be used instead. For example, it could be proposed that the renovation projects should bring existing public buildings to at least a B rating.

Energy performance contracting

PU Europe supports efforts to remove barriers to the effective use of performance contracting in particular those regarding the split between the budgets for investment and annual running / maintenance costs.

It should however be noted that performance contracting is not necessarily interesting from a cost point of view, as public authorities usually lend at lower rates on capital markets than private companies and do not include profit margins. The focus should therefore be placed on the expertise and guaranteed savings which energy performance contractors offer.

Implementing energy efficiency on the ground

PU Europe fully supports the activities around the Covenant of Mayors and is prepared to provide expertise and contribute to demonstration projects.

3. PAVING THE WAY TOWARDS LOW ENERGY CONSUMING BUILDINGS

Given the sheer size of the EU's stock of privately owned buildings, this area could potentially provide the lion's share for the 2020 energy savings target. The measures outlined in this chapter are however too vague to tap this potential.

In reality, Europe needs a tripling of renovation rates from now up to 2020. This level must be kept until 2050 if Europe is to meet its short and long-term energy, carbon and economic goals. An EU strategy for widespread deployment of deep renovation (reducing the energy demand by an average factor of 6, representing an 84% improvement in existing levels of performance[3]) in the existing

[2] Transforming Europe's buildings - A country-by-country review on the energy performance of buildings (Building Performance Institute Europe)

[3] Estimated to be the available cost-optimal deep renovation savings potential. See eceee Hermelink, "How Deep to Go"

building stock is required to capitalise on this potential and to avoid a lock-in of the savings potential in the building stock if not done properly the first time.

If all existing buildings are to undergo deep renovation to the "factor 6" level by 2050, it will be necessary to renovate at least 5 million buildings across the EU annually over the next 40 years. With an existing building stock of around 210 million, up to 50 million buildings will thus need to be renovated to at least this standard by 2020, as an interim target. The need to act starts now.

It is important that Member States include in their roadmap an ability to move towards deeper renovations as early as possible. Building capacity, technical know-how, support programmes etc. can take time and a clear understanding of how to move towards more comprehensive renovation programmes is essential. Sub-optimal renovations will, over the short-term, allow Member States to meet interim targets. However, over the long-term, projections have shown that this will make it harder and more expensive to meet 2050 reduction targets and could even increase overall energy use and carbon emissions in such buildings.

Tackling heat use in buildings

Although this is clearly the key area for any ambitious energy efficiency policy, no binding or stringent action is proposed. The 3% deep renovation rate, proposed for public buildings, should be applied to private buildings, too. Furthermore, the chapter should include cooling needs as this is the fastest growing energy consumption area in buildings, as well as hot water, lighting and auxiliaries.

As outlined above, the renovation needs must be put in the context of the EU's 2050 Energy Roadmap. Action must start now, if we want to achieve 80-95% reductions in CO_2 emissions. For buildings, this means that:

- The entire building stock needs to undergo deep renovation by 2050.
- Ambitious intermediate objectives for 2020, 2030 and 2040 need to be set.
- A roadmap to achieve these objectives according to local, regional and national needs should be developed.

Targets could be defined in a step-wise manner:

- First at building stock level: average annual consumption of the building stock to be divided by x% until 2020, 2030, 2040 (consumption in kWh/m².year for heating, cooling, hot water, lighting and auxiliaries)
- Then per building type: a maximum annual consumption limit in kWh/m²/year for heating, cooling, hot water, lighting and auxiliaries + a maximum limit for heating and cooling energy demand (to ensure that the bioclimatic design principles and the quality of the building envelop are well considered)

The final and interim targets should not be negotiable, but Member States should be free to choose the most appropriate tool for achieving them.

Training

PU Europe supports the Commission proposals in this area. Due to subsidiarity issues and the multitude of stakeholders involved (employers' organisations, trade unions, national / regional governments, training centres), one should not expect immediate and significant progress through the Commission initiatives.

PU Europe is willing to support the Commission in its efforts to raise the awareness of Member States regarding the needs to swiftly increase the skills levels of construction workers and encourage youngsters to join the industry.

Energy Service Companies (ESCOs) as catalysts for renovation

ESCOs have an important role to play in realising Europe's energy savings potential. PU Europe can therefore support the proposed measures.

On the other hand, ESCO's are usually only interested in projects with short pay-back periods to reduce the cost of financing projects. Requiring them to look into deep renovation (and thus accepting longer pay-back periods) might be in conflict with their very business model. However, we need deep renovation to avoid lock-in effects and tap the whole energy savings potential at cost-optimal levels.

To (partially) overcome this conflict, the financial cost for ESCOs should be reduced when they offer deep renovation projects. This could be done via low cost credits offered by energy efficiency funds (see below).

4. ENERGY EFFICIENCY FOR COMPETITIVE EUROPEAN INDUSTRY

Efficient generation of heat and electricity

PU Europe would support the requirement to use best available technologies in new energy generation facilities.

Energy efficiency as a business sector

PU Europe can only partially support the proposals in this section.

- It is true that utilities could bring badly needed financing to the energy efficiency sector.
- However, an energy supplier is unlikely to shift its core business to energy efficiency after having invested many billions of Euros in generation capacity with pay-back periods of several decades.
- Companies controlling energy supply should not be given the control over the energy efficiency sector without very strict conditions.
- The focus should be placed on an independent, innovative and competitive sector of small and large energy performance providers for whom energy efficiency is the core business.
- Experience shows that utilities with an energy savings obligation prefer easy solutions helping them to meet their quota at lowest cost. They do not have a holistic view on the building cost-optimal savings potential. In practice, this leads to lock-in effects as, for example, the roof insulation will not be touched on for decades, even if installed far below cost-optimal levels.
- The transaction costs of white certificate schemes seem to be very high. They should be compared with those of other energy saving schemes.
- There is a risk that such obligations replace other successful schemes tailor-made to the conditions of specific Member States.

PU Europe proposes the following:

- The Commission should conduct a study comparing the effectiveness of energy savings obligations compared to other energy savings schemes (with a focus on transaction costs);
- To ensure the development of an independent sector of energy efficiency providers and reduce transaction costs, utilities could be asked to pay into an energy efficiency fund. This fund could be used to reduce to financial costs for ESCO's and provide low interest loans to building owners / users wishing to invest in energy efficiency. The fund should offer preferential conditions for deep renovation projects. The energy service departments of utilities should be able to use these funds to the same conditions.
- If Member States have to develop energy savings obligations schemes, they should ensure that
  - any discrimination against independent energy efficiency providers (ESCOs) is excluded (they can generate white certificate to sell them to the obliged actors at all times).
  - only deep renovation projects should count towards meeting the savings obligations.

Increasing the competitiveness of European manufacturing industry

- PU Europe supports the measures proposed for SMEs as they usually have no internal energy monitoring system and nobody in charge of energy issues.
- Energy efficiency is already a reality in energy-intensive industries as it is simply an economic imperative to maintain competitiveness. The adoption of new, more efficient manufacturing technologies, - when existent – is highly dependent on long-term planning and forecast product demand over a number of years due to the long periods of returns on investment. The need for stability and market growth is therefore the main driver for upgrading existing installations and / or investing in new plants. As a matter of rule, most new installations realise the maximum cost-effective savings potential.
- The cost-effective savings potential (referring to today's state of the art) has been largely exploited. CO_2 abatement costs per ton are therefore much higher in the manufacturing industry than they are in construction or transport.
- There is already a very comprehensive EU policy framework that serves as a constant additional incentive to become more energy-efficient, i.e. EU ETS, IED (IPPC), etc.
- Eco-profiles (for raw materials) and environmental product declarations for end products are an efficient driver for improvements as they allow comparisons between the average industry and individual performance levels.
- Energy efficiency requires production of energy efficient products. The highly efficient European industry can provide them. An absolute cap for energy consumption would limit growth of industry. This would not reduce dependence on imports, as energy imports would only be substituted by imports of products. Already today, the EU is importing CO_2 and is exporting value-adding manufacturing jobs.

Given the above, PU Europe does not support mandatory audits for large companies.
Voluntary agreements might offer a certain added value provided they respect investment cycles and pay-back periods for energy efficiency measures.

5. APPROPRIATE NATIONAL AND EUROPEAN FINANCIAL SUPPORT

PU Europe acknowledges the limited role the EU can play in overcoming financing barriers at local level.

- The EU's role on financing is to put into place all the necessary elements for ensuring that Member States make the correct economic choice of deep renovation of the building stock. These should include conditionality requirements for Community and other public funding; and mandatory progressivity (graduated incentive structures) in financial and fiscal schemes, including wider use of differentiated VAT for high-performance buildings.
- Community incentives should be provided to Member States to establish national Energy Efficiency Funds, Green banks and Green Bonds.
- High-quality investment grade audits for building certification at national level should also be a condition for receiving certain Community funding.
- The under-use of Cohesion Policy support for energy efficiency investments shows that the 4% should be made a mandatory amount to be used by Member States on buildings, rather than an optional cap.

A number of other key recommendations should be considered:

- Finance models should address market barriers such as the landlord/tenant split incentive and high ownership changeover.
- Funding programmes should provide long-term and stable incentives which stimulate deeper renovation rather than cherry-picking or stop-start incentives.
- Adequate monitoring and evaluation mechanisms should be an obligatory requirement of any fiscal or financial incentive to ensure the energy savings have been achieved.

6. SAVINGS FOR CONSUMERS

Empowering consumers with new technology

PU Europe subscribes to the statement that proper implementation of existing legislation remains a problem. We can also support objectives described in this chapter.

The information gathered by smart meters has a significant commercial value. Its legal owner must therefore be clearly defined. PU Europe believes that the building user should be the legal owner and be able to decide to whom he wishes to make it available. This is a prerequisite to ensuring fair competition between energy suppliers / transmission grid operators and independent energy efficiency service providers.

8. A FRAMEWORK FOR NATIONAL EFFORTS

PU Europe is in favour of using NEEAPs to measure progress towards the 20% target and to extend them to cover the whole energy chain.

- As the analysis shows, a number of Member States considered NEEAPs as an annoying obligation rather than a strategic tool to drive energy efficiency policy forward. In the future, more stringent guidelines are required to ensure that governments take this exercise seriously and see it as an opportunity.
- The expansion of the NEEAPS will probably be implemented with the revision of the Energy Services Directive. It appears however unlikely, even in the most optimistic scenario, that the revised directive becomes applicable before 2013. Member States will therefore not be able to present revised and extended NEEAPS by the time, when the Commission will present its assessment as to whether national measures would deliver the 20% target.
- The development of a monitoring framework is of paramount importance.

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