

## Enlightening Article 7 of the Energy Efficiency Directive

### Impacts of loopholes, lack of clarity and weak implementation on the delivery of energy savings under Article 7 of the Energy Efficiency Directive

June 2016

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Commissioned by: Climate Action Network Europe

### Context - Article 7 the cornerstone of the Energy Efficiency Directive

The 2012 Energy Efficiency Directive (EED) (2012/27/EU) is the EU's flagship legislation to achieve the 2020 energy efficiency target. It sets a framework for EU and national energy efficiency policies and measures. Article 7 is the cornerstone article of the Directive and requires Member States to deliver new end-use energy savings every year equivalent to 1.5% of average annual sales to final customers from 2014 to 2020.

This target is cumulative, meaning that a minimum amount of savings have to be delivered over the period and in the final year. It is calculated on the basis of the average annual energy sales over a three-year period. The Article allows the target to be reduced by excluding transport sales from the baseline calculation and by an additional 25% linked to a broad range of conditions which any country can fulfil without material effort. On average this halves the effective annual savings from 1.5 to 0.75%.

From the first national plans to implement Article 7 provided by Member States to the European Commission in 2013, it is clear that the Article leads to the implementation of a wide range of measures, since it allows flexibility for Member States to tailor measures to national circumstances. However, there are concerns that most Member States reduce their savings further by exploiting loopholes and lack of legal clarity, and by weak implementation, in particular insufficient measurement and verification. The European Commission has issued several guidance notes to overcome these problems but with limited effect as shown by this and other studies<sup>1</sup>.

This study assesses the impacts of loopholes, lack of clarity and weak implementation of Article 7 on the savings delivered per year, in order to enlighten these aspects ahead of the revision of EED in the coming months and years.

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<sup>1</sup> The Coalition for Energy Savings, 2015, Implementing the EU Energy Efficiency Directive - Latest analysis of Member states plans for end-use energy savings.

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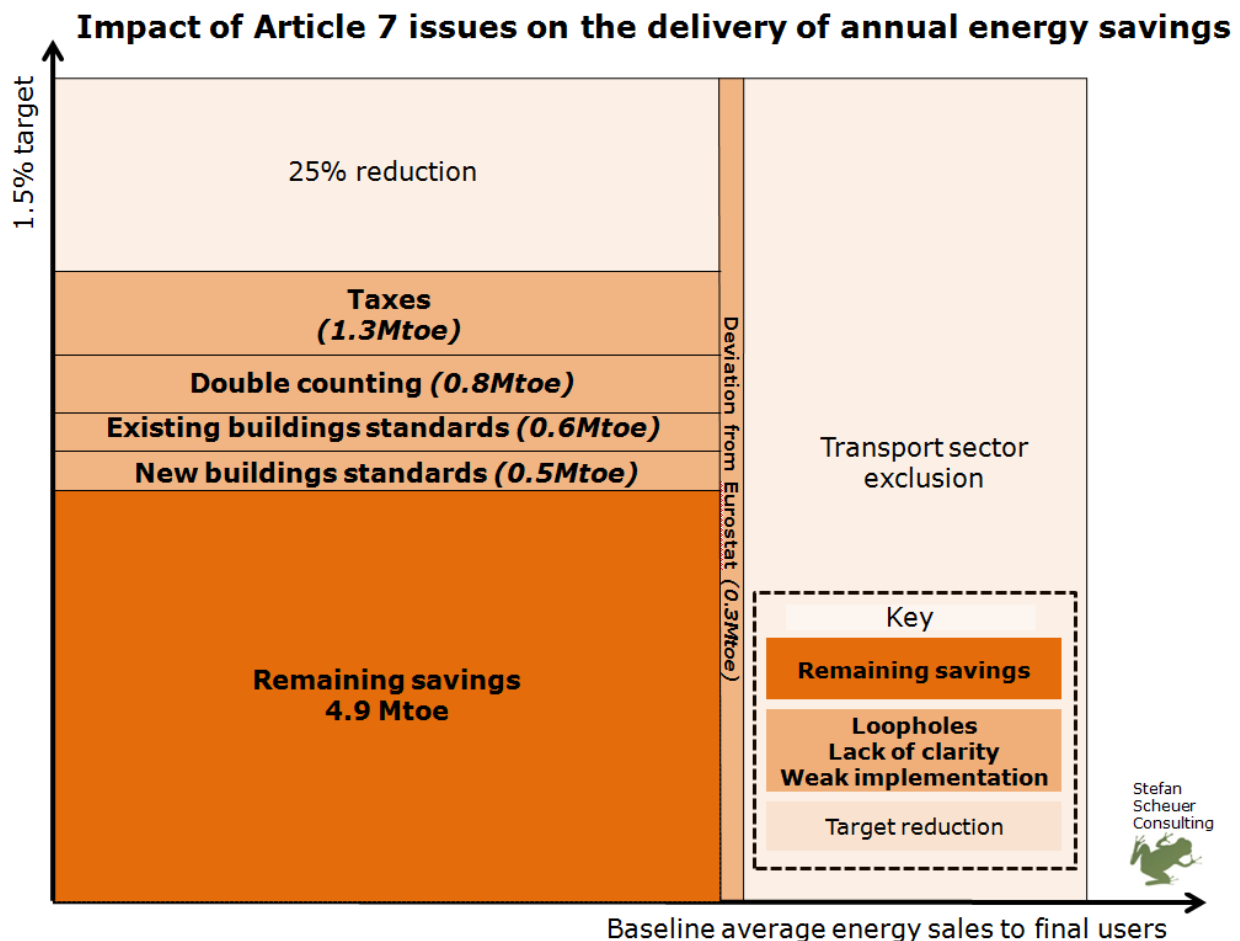


## Analysis and findings

The figure below illustrates the reduction of energy savings due to loopholes, lack of clarity and weak implementation, based on specific examples of these issues reported and planned by Member States. This estimation of the size of the impact for the whole of the EU aims to inform legislative decision-making.

The basic data comes from the national Article 7 reports and 2014 Energy Efficiency Action Plans and the analysis of these conducted for DG Energy in 2015 by Ricardo AEA<sup>2</sup>.

The main finding is that loopholes, lack of clarity and weak implementation significantly impact on energy savings. It could result in the remaining target, after all other reduction options are used, being reduced by 3.6Mtoe per year. Only some 4.9Mtoe energy savings per year are likely to be real and the result of dedicated and genuine national action– this represents 0.43% of the total energy sales, a figure to be compared with the original 1.5% target.



<sup>2</sup> Ricardo AEA et al, 2015, Study evaluating the national policy measures and methodologies to implement Article 7 of the Energy Efficiency Directive.



## Deviation from Eurostat – Statistical loopholes

Article 7 allows Member States to use their own energy statistics or data from Eurostat (the statistical office of the European Union) as a baseline to calculate the 1.5% target. The starting point is the energy sales to final customers, which is defined by Eurostat (Final Energy Consumption definition) as all sales excluding energy transformed on-site and used for own use or used for production of energy forms for non-energy use<sup>3</sup>.

However, many countries use their national data, leading to some deviations from the Eurostat data<sup>4</sup>. In Austria, Germany and Finland the baseline is significantly reduced. Given the publicly available explanation from these countries<sup>5</sup> we deduce that Eurostat and national statistics are not coherent and that these countries choose to apply the data that leads to setting up a lower target.

These three country examples reduce the savings by 0.3Mtoe annually.

## Taxes – lack of clarity

The intention of Article 7 is that only measures which are put in place with the objective of improving end-use energy efficiency can count toward achieving the target<sup>6</sup>. This is a fundamental legal provision that ensures that Article 7 focuses on driving national energy efficiency measures, which are checked against their delivery, as opposed to setting a target without any measures.

However, national plans from Member States for implementing Article 7 include many policy measures that may create doubts over whether they are genuine efficiency measures. This is particularly the case for pricing policies: taxes, charges and tariffs. Often these policies are introduced for general and state revenue purposes, for which a side effect is increasing energy efficiency. For example, Germany claims that its air traffic tax is delivering Article 7 energy savings, although it is a general tax to improve state revenues. Also Germany's eco-tax from 1999 is put forward as an energy savings measure, although it does not primarily aim to deliver energy savings, but to shift the tax burden from labour to resource use.

Besides the issue of the eligibility of tax measures, they are difficult to monitor and verify in terms of actual delivered savings. Most Member States recognise that the impact of tax measures decreases over time, unless adjustments are made. Sweden for example includes plans for new steps to deliver continuous improvements, but these need to be carefully monitored to ensure they are really delivering energy savings. In

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<sup>3</sup> European Commission, 2013, SWD(2013) 451, Guidance note on Directive 2012/27/EU on energy efficiency, Article 7: Energy efficiency obligation schemes.

<sup>4</sup> The Coalition for Energy Savings, 2015, Implementing the EU Energy Efficiency Directive - Latest analysis of Member states plans for end-use energy savings.

<sup>5</sup> Such as from national article 7 implementation plans, National Energy Efficiency Action Plans (NEEAPs) and Government replies to parliamentary questions. Detailed responses from these countries have been provided to the European Commission, in response to EU Pilots, but these responses are not publically available.

<sup>6</sup> See Energy Efficiency Directive Article 2.18 definition of 'policy measure' and European Commission guidance (SWD(2013) 451) which states that "*this excludes policy measures that are primarily intended to support policy objectives other than energy efficiency or energy services [...]. Examples [...] would be construction of new roads to ease traffic congestion, various energy grid networks charges, or feed-in tariffs.*"



addition, the price elasticities of tax measures must be defined by Member States using recent data and for some Member States the use of these elasticities is not clear<sup>7</sup>.

In total 1.3 Mtoe of savings per year are claimed from energy and CO<sub>2</sub> taxes<sup>8</sup>, of which a large part may not be focused on energy efficiency or may not be delivering real savings.

## Renewable energy measures – lack of clarity

As the name of such measures suggest, in most cases renewable energy measures are not primarily aimed at increasing energy efficiency and thus should not count towards the target<sup>9</sup>.

The impact of renewable energy measures from some seven countries on the target was found to be small (0.1 Mtoe) compared to other issues analysed in this study. However, this is expected to grow over the coming years.

## Standards for new and existing buildings – lack of clarity

The savings driven by Article 7 should be a result of national activities and thus go beyond minimum standards set at EU level. The main area here that needs further clarification is related to buildings. While national activities to speed up the renovation rates, such as funding programmes, clearly count as Article 7 savings, the setting of building codes and standards is more complicated. The guidance from the European Commission<sup>10</sup> says that only national building regulations that are above EU minimum requirements can be counted (i.e. introducing nearly zero-energy buildings (nZEB) standards for new buildings earlier than set out in EU legislation, or renovation standards that go beyond cost-optimal levels). Nevertheless, many Member States have counted savings delivered through their building standards for existing and new buildings towards the target, regardless of whether they go beyond EU levels. For some countries, such as the UK, savings from these measures contributes over 50% of the savings needed to achieve their targets – the UK fully counts all savings arguing that they implemented building codes before the EPBD came into force.

Savings from national building standards related to EU standards for new and existing buildings make up 1.2Mtoe per year<sup>11</sup>. Given that only one country<sup>12</sup>, Austria, provides some justification of why these measures go beyond the EU minimum, we assume that a large part of those savings are not beyond EU levels. Only Germany and Finland explained how the savings are split for either new or existing buildings, the ratio was 1:3

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<sup>7</sup> Further information on price elasticities is in the Energy Efficiency Directive Annex V and European Commission guidance (SWD(2013) 451).

<sup>8</sup> Ricardo AEA et al, 2015.

<sup>9</sup> It should be noted that renewable energy measures could be designed in a way to enhance own generation and own consumption simultaneously and thus reduce energy sold, for example, one-off installation support for onsite PV or thermal heat collectors combined with incentives to improve the buildings energy performance, rather than a feed-in tariff.

<sup>10</sup> European Commission guidance (SWD(2013) 451) states that “only savings that go beyond the minimum requirements originating from EU legislation can count” and “Standards and norms that are ‘mandatory and applicable in Member States under Union law’ do not count”

<sup>11</sup> Ricardo AEA et al, 2015.

<sup>12</sup> Further explanation from other countries has been provided to the European Commission, in response to EU Pilots, but these responses are not publically available.



Germany and 2:1 for Finland. Due to lack of further data we applied a 1:1 ratio in this analysis.

## Double counting – weak implementation

There are concerns that the same energy savings may be counted as a result of more than one instrument. In theory this should be overcome by stringent monitoring and verification checks, but for many Member States these systems are in the early stages of being established. This is also expected to be more likely where a Member State uses an Energy Efficiency Obligation and alternative measures to achieve its target.

In its 2016 annual report on energy efficiency<sup>13</sup>, the Netherlands includes a “correction for double counting and correction” which is equal to ~9% of the savings they report for 2014. Considering that most national reports do not provide evidence that double counting was tackled and only the Netherlands data is available, we assume that 9% of savings could be double counting. This would reduce the actual savings delivered by 0.8Mtoe a year.

## Target reduction

It has been shown in a number of studies<sup>14</sup> that the exclusion of all energy transport sales from the baseline to calculate the 1.5% target and the ability to reduce that target by up to 25%, reduce the 1.5% annual target to a 0.75% target. This is an important issue to be aware of but not the main focus on this study since the impact has been well explained by other studies.

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<sup>13</sup> 2016 annual report on energy efficiency in the Netherlands

[https://ec.europa.eu/energy/sites/ener/files/documents/NL%202016%20Energy%20Efficiency%20Annual%20Report%201\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/NL%202016%20Energy%20Efficiency%20Annual%20Report%201_en.pdf)

<sup>14</sup> DG Parliamentary Research Services (EPRS), 2016, The Member States’ plans and achievements towards the implementation of Article 7 of the Energy Efficiency Directive.

The Coalition for Energy Savings, 2015, Implementing the EU Energy Efficiency Directive - Latest analysis of Member states plans for end-use energy savings.



## Recommendations for improving Article 7

These recommendations focus on addressing the issues discussed in this paper in terms of preventing loopholes, providing clarity and improving implementation.

### Preventing loopholes – transparent data

Allowing Member States to use any data they wish, while the EU is investing in building up a reliable database via Eurostat, is ineffective, increases administrative burdens and reduces accessibility and transparency. Therefore we recommend that only Eurostat data should be used for setting the baseline for calculating the target.

### Providing legal clarity

Many pricing instruments introduced (such as taxes, charges and tariffs) have objectives other than increasing energy efficiency, for example, generating state revenues, reducing CO<sub>2</sub> emissions, promoting renewable capacities or building roads or power grids. However, energy efficiency measures will only be effective if they are dedicated to energy efficiency, predictable for investors and deliver real end-use energy savings. Policies must be focused on energy efficiency to allow them to evolve in tune with the efficiency market and give investors certainty that they will continue and the focus not be shifted to other priorities.

The revision of Article 7 is an opportunity to clearly define that only measures that have as their main aim the increase of energy efficiency can count toward reaching the target.

Furthermore, the Commission must enforce that national measures counting towards Article 7 must go beyond EU level standards and provide guidance on this. It is important to provide a clear definitions and further guidance, especially related to how savings above EU standards can be counted towards achieving the target. All the relevant EU minimum requirements that need to be considered should be explicitly mentioned in the revised legislation to avoid misunderstandings and ease the administration burdens. And Member States should report to the Commission how the measures counted to achieve the target go beyond EU minimum requirements.

### Improving implementation – monitoring and verification

Savings claimed from tax measures require scrutiny, as the provided evidence on price elasticities is inadequate and tax levels are stagnating in many cases. The Commission should provide a common methodology for assessing taxation impacts and Member States should be required to notify the assumptions and the methodology used behind the claimed savings to the Commission. Furthermore, Member States must have proper monitoring systems set up to verify savings and ensure there is no double counting.

