

## POLICY PAPER

### LOST IN THE GAS BUBBLE:

#### COMMISSION IGNORES NEW ENERGY WORLD REALITY



**Claude Turmes**  
Member of the European Parliament



The Greens | European Free Alliance  
in the European Parliament

Strasbourg, 4 February 2016

## Introduction

After the successful COP 21 in Paris, everybody would expect the European Commission to adapt EU policies so that the global objective of 1.5°C is reflected in a higher level of ambitions, in line with the vision of a decarbonised economy by 2050.<sup>1</sup>

But **the European Commission seems to ignore the Paris momentum**. It is particularly annoying that the first reaction of the European Commission after the Paris agreement is to propose a so-called "security of gas supply" package based on misleading gas demand scenarios that risk triggering billions of euros invested in stranded assets. This **tendency to overestimate gas demand** is even pointed out by the European Court of Auditors itself, underlying that "*the Commission has persistently overestimated gas demand during the period, and needs to restore the credibility of the forecasts it uses*".<sup>2</sup> This erroneous forecast is of course giving real pleasure to the promoters of counterproductive projects such as the doubling of the **Nord Stream** gas pipeline<sup>3</sup> and risks to trigger billions of private and public financed stranded investments in gas infrastructure, replicating at EU level the negative Spanish gas over-investment experience. We believe that the focus of the "security of supply package" should rather go to promote **energy savings** investments, particularly in the buildings heating and cooling sector. This should go hand in hand with a strategy to **end the fossil fuel dominance in the heating and cooling sector** (currently 84% of heat is generated from oil, gas or coal). Such a strategy would reverse the money flows: instead of sending billions to our suppliers outside of the EU, we would invest in European technology and create hundreds of thousands of local jobs.

But again the EU Commission's answer is appalling. In a moment where all energy experts and institutions like the IEA discuss the impact of the historically low oil price on efficiency and renewables policies, the Commission does not present a single idea on how the EU should react. We think that **we need a coordinated European tax shift strategy**: taxing the "climate hostile" fossil fuels and allocating the income to three pillars: a "Juncker +" investment plan to accelerate clean investment, a targeted

<sup>1</sup> European Commission, [Energy Roadmap 2050](#), 15 December 2011,

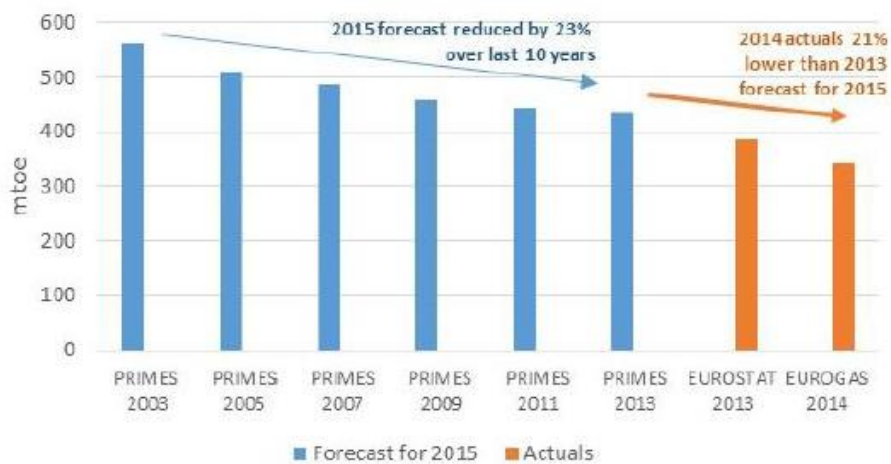
<sup>2</sup> European Court of Auditors, [Improving the Security of energy supply by developing the internal energy market: more efforts needed](#), December 2015.

<sup>3</sup> See my Policy Paper of 7 October 2015 on Nord Stream, available at <http://bit.ly/NoNordStream>

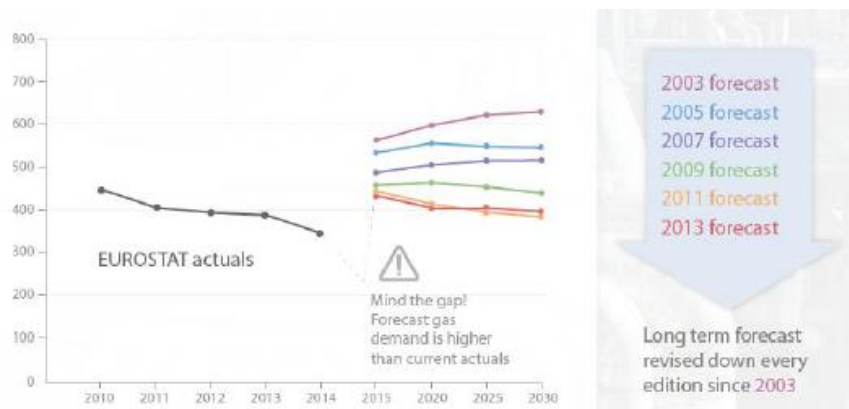
energy poverty plan and a reduction of labour cost. As these major weaknesses in the Commission's analysis cannot be addressed in one week, we propose to postpone the adoption of the package foreseen next week.

## 1. Mind the gap! Demand reduction is already happening

Both the Commission and the gas sector have a **history of overestimating gas demand** in their scenarios, as outlined in a recent report from E3G.<sup>4</sup> The European Commission's projections in the PRIMES model faced lower gas demand than their scenarios predicted every year since 2003. This unreliability was pointed out by a recent report from the European Court of Auditors, underlying that *"the Commission has persistently overestimated gas demand during the period, and needs to restore the credibility of the forecasts it uses"*.<sup>5</sup>



Source: European Commission, Sandbag, E3G

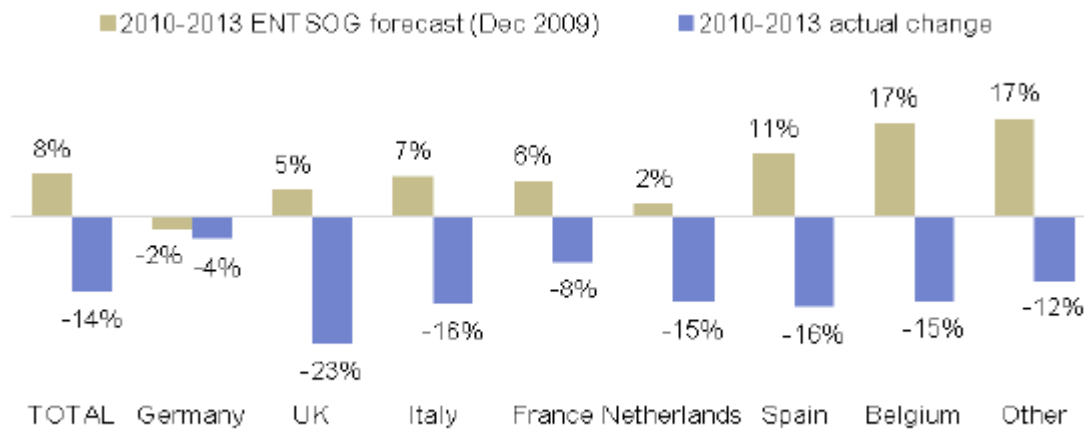


Source: European Commission, Sandbag, E3G

<sup>4</sup> E3G, [Europe's declining gas demand: trends and facts on European gas consumption](#), June 2015.

<sup>5</sup> European Courts of Auditors, *Ibid.*

We can notice a similar pattern in the projections of the ENTSO-G Ten-year network development plan (TYNDP) which aims to "provide a consistent view of the pan-European gas infrastructure and signal potential gaps in future investment"<sup>6</sup>: in 2009, they expected a gas demand increase of 8% in the period 2010 to 2013 while in fact it decreased by 14%.



Source: ENTSO-G, Sandbag, E3G

**Overestimated gas demand in the EU<sup>7</sup> is encouraging projects which will not be profitable on long-term, becoming stranded assets.** In Spain for instance an immense amount of money was invested for LNG terminals which are used between 17% and 36% on average.<sup>8</sup> A recent report from Carbon Tracker highlights that "some companies are betting on big growth in LNG capacity. However this is based on energy demand growth and gas' share of this larger pie". There is worldwide \$283 billion of possible (LNG) projects to 2025 are likely to be surplus to requirements in a low demand scenario.<sup>9</sup>

**Some localised LNG terminal may be justified**, such as the Klaipeda one which immediately provoked a 20% rebate on gas price charged by Gazprom, a breath of fresh air for Baltic States. Similarly, **some necessary reverse flows** have been built recently or are planned. But the current expectations to build LNG terminals and pipelines were not a single molecule of gas could flow is a sign of the blindness of our decision-makers in the sector of gas, illustrated amongst other examples by the scandalous CASTOR gas project in Spain, a failure worth a 1.3 billion euro.<sup>10</sup> The Commission should stop violating the Parliament's position to even out gas and electricity projects amongst beneficiaries of the Connecting Europe Facility (CEF) while so far gas has largely overtaken electricity.

Our analysis is backed by a new research from Artelys assessing a wide range of demand scenarios and supply disruption cases for 2030 and finding that "in none of the cases new cross-border gas infrastructure

<sup>6</sup> <http://www.entsog.eu/publications/tyndp>

<sup>7</sup> Energy Post, [Europe gas demand falling. Doesn't anybody notice?](#) 9 July 2015.

<sup>8</sup> For example, the existing pipelines are used to 55% to 70% of their capacity, LNG terminals in Spain at 17% and 36% of their capacity (CEER, *Status Review on monitoring access to EU LNG terminals in 2009-2013*).

<sup>9</sup> Carbon Tracker, [Carbon supply cost curves: Evaluating financial risk to gas capital expenditures](#), July 2015.

<sup>10</sup> Catalan News Agency, [Taxpayers foot the bill for Madrid and EU's mistakes, paying €1.3billion to bail out failed Castor Project off Ebro Delta coast](#), 3 October 2014.

is needed beyond the existing ones, with the exception of some specific projects in South Eastern Europe to provide optionality and resilience under Ukraine gas supply disruption".<sup>11</sup>

Thanks to ambitious energy efficiency targets and measures, **gas demand has been declining and is likely to continue doing so**. Encouraging unsustainable projects with non-EU partners will deepen our dependency situation with the perverse effect that the need of return on investment will counter the need for more efficiency. Is it really the best way to help European economy recover? Nord Stream is the most striking example of this paradox, and we hope these unrealistic scenarios are not a signal of a political U-turn on the doubling of Nord Stream. Once again, we urge Juncker Commission not to allow the completion of this harmful project.

**The Commission should first do its homework and suspend the adoption of the "security of gas supply package" until new credible scenarios are put forward.** An independent task-force should be established in order to restore credibility and submit realistic options before summer in order to serenely prepare the non-ETS effort sharing decision and upcoming legislation on efficiency (on which the Parliament already expressed clear views to set a target of 40% for 2030).

## 2. Did the Commission notice low oil price?

In a context of low oil price, the question of funding decarbonisation is even more acute. In November 2015, Fatih Birol's IEA published a World Energy Outlook with two scenarios. In the "central scenario", oil and gas prices will increase again and reach at least 80 USD/barrel in 2020. In the second scenario however, the IEA is wondering: "**What if prices stay lower for longer?**" with the negative consequence that "*the world misses out on almost 15% of the energy savings seen in our central scenario, foregoing around \$800 billion-worth of efficiency improvements in cars, trucks, aircraft and other end-use equipment, holding back the much-needed energy transition*".<sup>12</sup> The EU should be prepared to the second scenario that can also strengthen EU's economy by **reducing significantly our trade deficit and our energy bill** (lately amounting to more than 400 bn € annually).

### Why is oil price so low?

American and European energy efficiency measures are shaping geopolitics! Legislations like CO2/cars, buildings performance requirements and ecodesign have a tremendous impact on global oil prices.

In addition, slowdown of Chinese and European economies is a contributing factor. Unconventional oil production was probably larger than initially expected. Finally, the absence of an agreement between OPEC countries to reduce conventional oil production is also a decisive factor. While the explanation of falling oil price is certainly multifaceted with many drivers involved, the EU and US energy transition are powerful levers to shift the geopolitics of energy from resource domination to technology domination.

Lower oil prices must open up a space for reforms. There is a momentum throughout the world to improve energy. This is exactly the sense of recent works from Nicholas Stern suggesting that **low oil price create a basis to reform energy subsidies, introduce a carbon price and tackle air pollution: "the**

<sup>11</sup> European Climate Foundation / Artelys, *Energy Union Choices*, to be released on 3 March 2016. Quote from Laurent Fournié, Vice-President for Eergy at Artelys.

<sup>12</sup> IEA, [World Energy Outlook 2015](#), November 2015.

*current low fossil fuel prices create an opportunity to overcome such difficulties*". Low oil prices present an opportunity to avoid future "stranding" of assets: "*producers are now cutting back on investment in the development of high-cost oil resources that are no longer viable under lower oil prices*".<sup>13</sup> The Commission should realise this is exactly what will happen to their cherished gas pipelines.

How to concretely promote efficiency and decarbonisation of the heating sector in an era of low oil, gas and coal price? More than ever, **standard setting** is crucial. Ambitious emission standards should not only apply to cars and buildings but also to heating equipment and boilers. For this reason, ecodesign minimum requirements should be revised upwards, together with a strong labelling policy including fast A to G rescaling. Secondly, **higher energy taxation** is a means to finance an EU efficiency and RES investment programme. The current situation is a unique chance for the tax shift to happen: Member States should introduce a progressive environmental taxation, implying that only part of the reduction of oil price should be translated into lower price for final consumers. Thirdly, the Commission should **enlarge the "smart finance for smart buildings" initiative to the heating sector**, notably helping heating and cooling projects to benefit from appropriate technical assistance and project development assistance foreseen under the Juncker plan and under the structural funds. The modernisation and greening of existing district heating systems should be at the heart of this effort. Fourthly, the Commission should outline in their heating and cooling strategy measures to **revitalise the ESCO market**. In line with the EEFIG recommendations,<sup>14</sup> this notably goes through a revision of EUROSTAT accounting procedures still imposing energy performance contracts to be reported as debt, deterring local governments from investing.

Finally we can't analyse the impact of low oil price without mentioning **transportation**. The transport sector is the worst performing sector when it comes to climate change. Firstly, the EU should diminish its oil dependency in a context where **global resource leadership is replaced by technology leadership**. The future of transport should be **smarter** (larger space for pedestrians, bicycles and public transportation), much more **efficient** (higher standards for cars, vans, trucks, aviation, and shipping) and **electrified**.

The Commission should assess the **impact of low oil and gas price on the European economy** and come forward with concrete proposals opening the debate on tax shift in order to use this momentum to introduce environmentally friendly taxation. The Commission should also come with a fully-fledged strategy to decarbonise and electrify the transport sector.

### 3. A strategy for heating and cooling: efficiency first

Investments could be more effectively spent in energy-efficiency projects and other measures promoting energy security. More emphasis on energy efficiency and related policies will further reduce gas demand and thus reduce the dependency of the EU to foreign sources of energy. **More efficient systems are needed both in industrial processes and in residential/tertiary buildings**, based on a strict enforcement of existing legislations. Instead of pushing for a non-necessary revision of the EPBD (energy performance of buildings directive), this directive should be fully implemented, as well as the provisions of the EED (energy efficiency directive).

<sup>13</sup> Per Klevnäs, Nicholas Stern, and Jana Frejova, [Oil prices and the new climate economy](#), May 2015.

<sup>14</sup> EEFIG, [Final Report](#), February 2015.

The Heat Roadmap Europe for 2050 study<sup>15</sup> indicates that in terms of energy efficiency and thus heat savings, **total demand of heat in Europe can be reduced by 30-50%**.<sup>16</sup> In 2013, the EU energy intensity (the ratio of gross inland energy consumption and GDP) was 32% below the 1990 level, despite large discrepancies between Member States: Estonia, Czech Republic and Bulgaria show the highest energy intensity rates and Ireland and Denmark the lowest. The bulk of European heat is consumed in not very well insulated buildings, especially in these Member States, hence we should push deep renovation of our building stock, also triggering the creation of qualified jobs and contributing to alleviate fuel poverty.

SMEs should be encouraged and helped to implement the requirements that weigh upon them (such as the **recommendations stemming from energy audits**). There should be requirements for the assessment of the efficiency of office buildings and in remote areas the promotion of more efficient boilers and heat pumps should be encouraged.

In industry, heat needs are higher than in other areas. They can be reduced by improving energy efficiency and by creating synergies between different industries as we move towards a circular economy.

#### 4. Towards 100% RES for heating and cooling: coal and oil should stay underground

The total gross heat production for the EU-28 was 2.45 million TJ in 2012,<sup>17</sup> relying for 84% on fossil fuels and only 16% on renewable energy sources.<sup>18</sup> Did the Commission understand that **in a 1.5 degree scenario, there is no space any longer for fossil fuels in Europe by 2050**? Beyond climate, a shift towards renewable energy sources can contribute to the much needed global pollution reduction and be beneficial in terms of energy security, health, job creation and empowerment of local and regional communities.

We need a concrete decarbonisation agenda: coal and oil should be pushed out of the heat market immediately, following the example of the city of Krakow who decided to ban the usage of coal.<sup>19</sup> The transition towards renewable energy sources should be progressive. Firstly, RES are able to cover most **residential heat needs** (relatively low temperatures), especially when combined with deep renovation of the buildings stock and the mandatory introduction of near-zero energy new buildings (nZEB) as of 2021. Then, the EU should intensify its R&D and innovation effort to substitute gas for **heat generation in the industry** (with high temperature needs).

##### *a) District heating systems and cogeneration*

Heat infrastructure matters and **existing district heating networks are strategic assets**. In urban areas, heat density calculations should be made to assess where **district heating** makes sense and the creation of new or the renovation of existing district heating networks should be encouraged where they do so. **Old inefficient district heating infrastructure should be modernised** and combined with renewable energy sources such as biomass, as it was successfully done in Sweden, Denmark and the Baltic States where cities like Vilnius and Kaunas are upgrading their installations and bringing them in line with the

<sup>15</sup> Made by Aalborg University, Halmstad University and Ecofys on the initiative of Euroheat & Power.

<sup>16</sup> <http://www.heatroadmap.eu/>

<sup>17</sup> Eurostat, *Electricity and heat statistics*, data from May 2015.

<sup>18</sup> European Commission, *Roadmap on the Heating and Cooling Communication*, July 2015.

<sup>19</sup> The Guardian, *Poland's second city to ban coal use after anti-smog law approved*, 7 October 2015.

EU emission requirements.<sup>20</sup> Where old and inefficient district heating networks exist, refurbishment should be a priority. Situations where up to 50% of generated heat is lost during transportation because of bad maintenance of infrastructure are unacceptable. Unreliable systems such as the ones operating in some Romanian and Bulgarian cities push consumers towards individual solutions which further weaken the system and constitute a climate non-sense. Refurbishment of existing systems can save great amount of energy.<sup>21</sup>

**Avoiding industrial waste heat** should be a priority, increasing energy efficiency and fully seizing the opportunities of a circular economy. Industries should not work in silos but rather share their energy production and needs and work together, allowing improvements at every stage of the supply chain. A comprehensive framework should encourage industries to seize the potential of gathering in industrial parks and setting up a smart heating and cooling system which allows multi-usage of heat by several actors.

**Cogeneration**, especially together with district heating, has a significant potential to **capture wasted heat** and distribute it where needed. Thanks to the energy efficiency directive (and the way it promotes CHP and requires an efficiency threshold that must be maintained to qualify for support), CHP currently allows savings of minimum 10% of primary energy compared to separate production of heat and power.<sup>22</sup> Cogeneration together with coal, although representing an efficiency gain, should obviously not be supported. The only acceptable solution is cogeneration in combination with renewables following fuel switch to **geothermal, solar thermal, biomass or biogas** (respecting the sustainability criteria set out in the Renewable Energy Directive).

Renovations of district heating networks and fuel switch to renewables have **to be financed** based on a proper investment strategy. One part of the solution could be using the **EFSD** (European Fund for Strategic Investments) in which energy efficiency is included as a priority thanks to the work of the European Parliament and the ITRE position to support a 50 bn€ ring-fencing for energy efficiency. Furthermore, the **upcoming ETS Modernisation Fund** should be used to phase-out fossil fuels instead of modernising existing coal plants. Some ideas on financing the transition, boosting investments in renewables and energy efficiency can be found in the recently published **Luxembourg Declaration**.<sup>23</sup>

#### ***b) Self-generation, self-consumption, heat pumps and local solutions***

The energy union framework strategy calls on citizens to take ownership of the energy transition, notably in the communication from 15 July 2015 “Delivering a new deal for energy consumers”.<sup>24</sup> With the rapid evolution of RES and the fact that heating and cooling needs **local solutions**, small scale decentralised systems should be encouraged. In order to reap the potential of **self and nearby generation of heating and cooling** both in industry and on a small-scale residential area, a comprehensive framework for self and nearby production and consumption as well as guidelines including the use and recommendations of technology are needed to encourage consumers to invest,

---

<sup>20</sup> The Lithuanian Tribune, [Brussels gives Vilnius and Kaunas power plants more time to upgrade](#), 19 December 2013 and District Energy, [New biofuel boiler-house in Vilnius](#), 4 March 2014.

<sup>21</sup> Euractiv, [Old district heating systems at risk of bankruptcy](#), 27 June 2012.

<sup>22</sup> COGEN communication from 4. November 2015: Combined heat and power: central to Europe’s economy.

<sup>23</sup> <http://bit.ly/LuxDeclaration>

<sup>24</sup> [COM \(2015\) 339](#) of 15 July 2015.

alongside an incentivising regulatory framework. Self-generation should not solely focus on power but also take heating and cooling into consideration.

Beneath sustainable biomass (wood pellets) and biogas, high efficiency **heat pumps** will play an increased role but need to be powered by renewable electricity. This is the case for residual heat needs in new buildings (coupled with PV panels for example) but also in rural areas to heat and cool with renewables rather than with individual oil boilers.

**Heating and cooling requires local solutions**, thus local public authorities need to be encouraged and guided in their choices. Independent experts should be gathered in **local energy agencies** offering information and advice. **Local authorities should be incorporated in the decision-making** process wherever possible. Movements and bodies such as the **Covenant of Mayors** allowing sharing of knowledge and best practice should be further encouraged and strengthened. The transition should be a common goal of the EU rather than a competition between companies, methods and Member States. Voluntary commitments by local authorities that go beyond the goals that the EU has set for itself should be encouraged and supported. We need to harvest the potential that the different regions of Europe offer. Shifting to 100% RES should not be seen as a challenge, but rather as an open window of opportunity with plenty of benefits which Europe is ready and has the capacity to seize.

#### ***c) Limited space for waste-to-energy***

Responsible use should be a priority. **Waste-to-energy** for instance can be an opportunity if it replaces land filling of final waste, but it can be a disaster if it competes with the circular economy and the necessity to waste less. It is necessary to assess the type of waste used to produce energy and the incineration method to avoid, again, the risk of technology lock-in.

## **5. Conclusions and recommendations**

We need to define the heating and cooling system of the future where near zero energy new buildings and districts will be the rule in EU, alongside accelerated deep renovation of existing buildings. Decentralised solutions adapted to diverging local realities are needed. Large-scale fossil-fuel technologies are still standard and a decarbonisation agenda has to be designed, implemented and enforced properly, based on a credible gas demand scenario moving away from gas infrastructure development.

#### ***We invite the Commission to:***

- Postpone the adoption of the "security of gas supply package" until credible gas demand scenarios are put forward.
- Open the debate with Member States on tax shift in a context of low oil price that has never been so favourable to proceed with tax shift, moving from labour to resources taxation
- Act by all possible means against the completion of the doubling of the Nord Stream project and prevent other gas stranded assets.
- Commit to a real energy efficiency agenda in the heating and cooling sector, via deep renovation of the building stock and guidelines to MS for the implementation of nZEB.
- Immediately introduce environmental standards to ban coal and oil from the heat market.



- Propose a path for a 100% RES scenario in the heating sector, making the best use of solar thermal, geothermal and sustainable biomass and biogas.
- Launch a R&D initiative on high temperature heat to substitute gas on the long term for the industry.
- Revitalise the ESCO market through a revision of accounting rules considering energy performance contracts as debt for local public authorities.
- Propose a "Smart financing for smart buildings" initiative enlarged to heating and cooling issues and offering concrete funding and technical assistance opportunities to clean projects, notably through a dedicated technical assistance task-force for Central and South-Eastern European countries.

#### **Contact**

Jérémie ZEITOUN  
Assistant to Claude Turmes, MEP  
Member of the Green Group in the European Parliament



European Parliament  
Rue Wiertz, 60, ASP 04 F 255/253, B-1047 Brussels  
Phone: +32 2 28 47 246 - Fax: +32 2 28 49 246