

## The Eternal Surplus of the Spineless Market

Why the carbon price will remain low even with a strong MSR

March 2015

### Summary

**Sandbag's analysis shows that even with a strong and early Market Stability Reserve (MSR), the Emissions Trading Scheme (ETS) surplus will stay at about two billion tonnes until 2020.**

The ETS reform proposals as approved by the Environment (ENVI) Committee should prevent the carbon price falling further, but Sandbag show they are unlikely to lead to large carbon price increases forecast by some analysts.

As a result, policy-makers should not be timid about making the MSR as strong and early as possible.

### About Sandbag

Sandbag is a UK-based not-for-profit think tank conducting research and campaigning for environmentally effective climate policies.

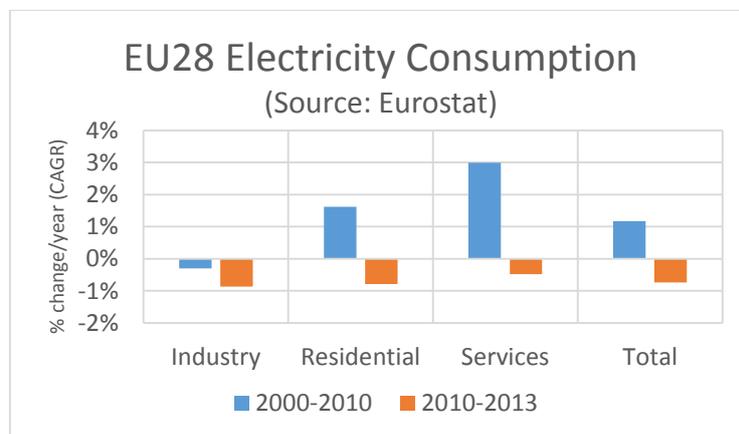
Our research focus includes reform of the EU Emissions Trading Scheme, the EU 2020 and 2030 climate & energy packages, Carbon Capture Storage & Utilisation, and the persistence of old coal in Europe. The International Centre for Climate Governance ranks us in the top twenty global climate think tanks.

For more information visit our website at [www.sandbag.org.uk](http://www.sandbag.org.uk) or email us at [info@sandbag.org.uk](mailto:info@sandbag.org.uk)

### Sandbag forecast: Demand

In October-2014, Sandbag released a [report](#), forecasting a 4.5bt surplus by 2020, which is significantly larger than other analyst forecasts, due mostly to our assumption of EU electricity consumption falling by 10% through this decade. This report provides a mini-refresh and update of events since last October; a full update will come out at the end of summer.

Our belief in falling electricity consumption lies in big changes to the residential and services sectors. Industry electricity consumption has been falling for some time, but electricity consumption in residential and services sectors has only begun falling recently:



Sandbag forecasts these falls in the residential and service sectors will accelerate:

- Firstly, new electrical growth is falling: new building rate of homes and offices is less half of last decade's levels, and many electrical products from air-conditioning to computers to set-up boxes all are reaching saturation, compared to their rapid growth last decade.
- Secondly, new electrical appliances have seen recent rapid increases in efficiency, and the replacement of existing electrical items will lead to large falls in electricity consumption in the residential and service sectors this decade, we believe. This is especially true of computers, datacentres, heating and air-conditioning systems, lights, refrigeration and TV's.

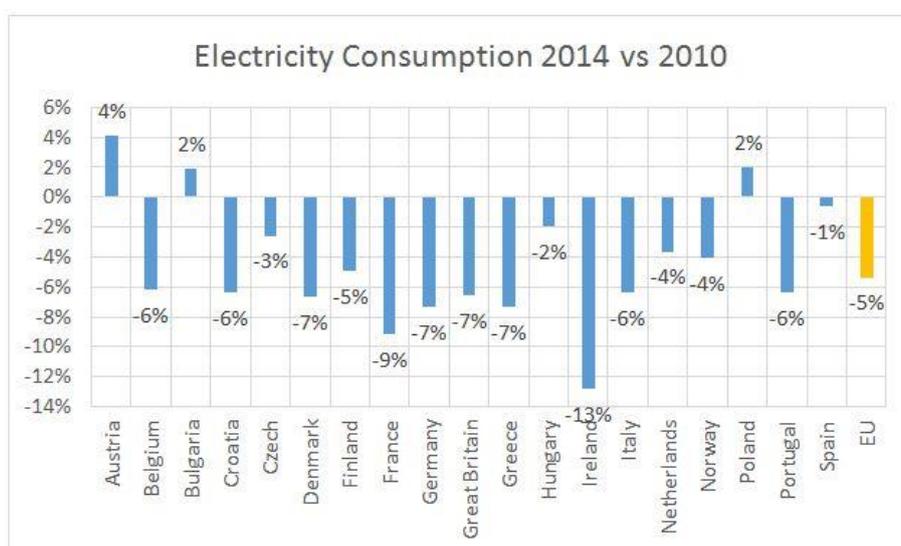
Electricity consumption is critical to understanding the future ETS surplus. Only about 40% of the EU's electricity is from fossil, and since fossil is the most expensive marginal fuel, a 1% fall in electricity consumption leads to a 2.5% fall in fossil generation. This, in turn, leads to about a 2.5% fall in ETS power sector emissions. Coupled with fast-growing renewables, Sandbag forecasts that EU power sector emissions will fall by 34% from 2013 to 2020.

The latest data confirms our October-2014 analysis:

- 2014 electricity consumption fell an [estimated 2.7%](#) in 2014. Although 2014 was very mild, weather-corrected electricity consumption also shows falls. The system operators that report weather-corrected electricity consumption are: Italy [-2.1%](#), France [-0.4%](#), Spain [-0.2%](#); UK was -2.4% for Q1-Q3 ([table 3c](#)), and Germany we estimate about -1.8% (based on [AGEB](#) - 3.5% actual fall, with over-generous 10TWh weather corrected).
- Initial 2015 electricity consumption gathered by Sandbag for Jan & Feb shows that UK, Italy and Czech was actually below the already low levels of Jan and Feb 2014.
- Buildings growth remains slow – the amount of new buildings built in Europe in 2014 [did not pick up](#), and remains at 1/3<sup>rd</sup> of its 2007 peak, despite an overall pick-up in construction.
- Continued slow economic growth – the IMF [downgraded](#) EU growth forecasts for 2015- 16.
- EU household electricity prices [rose](#) by 2.7% in 2014, although industry prices fell by 2.4%.

Sandbag estimate 2014 EU electricity consumption was 5% lower than 2010 levels (see Figure 1). This means we are well on target for Sandbag's forecast of a 10% fall this decade.

Figure 1: Change in Member State electricity consumption from 2010 to 2014 (Source: ENTSO-E)



We make 2 updates to our October forecast. First, a slight increase in total stationary emissions (+13mt in Phase 3). Second, we increase aviation demand, now the Commission has published more information on the cap and emissions (+161mt in Phase 3).

This reduces Sandbag's projected 2020 surplus from 4.5bt to 4.4bt.

## Sandbag forecast: Supply

We also update our forecast for likely changes to the supply-side, being discussed as part of ETS reform.

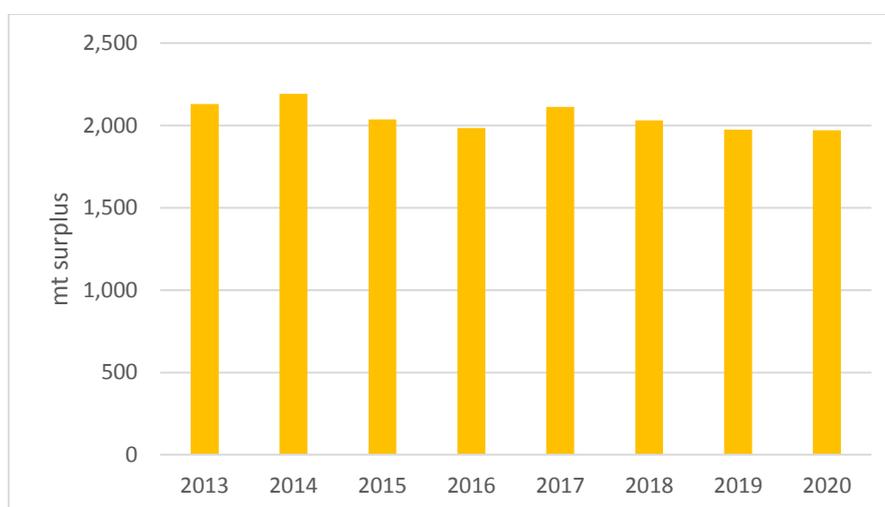
We assume a final outcome for the Market Stability Reserve proposal similar to the Environment Committee amendments:

- The back-loaded allowances go direct into MSR (900mt).
- Unallocated allowances are added to the MSR.
  - The default is that the unallocated allowances are auctioned back to market, so to add them to the MSR directly requires a change of legislation.
  - Sandbag recently [estimated](#) this applies to 754mt allowances from 2013 to 2020, as a result of cessations, capacity changes and unallocated NER.
- An early MSR start date of January 2018.
  - Due to the large Sandbag forecast surplus, this would mean auctions are reduced by 735mt across 2018 to 2020.
- No return of allowances to market through the "Innovation Fund", prior to 2020.

These measures will make a huge difference, reducing Phase 3 supply by 2.4bt (compared to 15.6bt, which is the legal cap).

However, even with this 2.4bt fall in supply, Sandbag still forecast the surplus would still be 2.0bt in 2020. In fact, on these assumptions, we forecast the surplus to continue at about 2bt from now until 2020:

*Figure 2: Sandbag forecast ETS surplus after a 2018 start to the Market Stability Reserve, with backload and unused allowances prevented from coming to market*



## Comparison to other analyst forecasts

The Sandbag forecast is substantially different to other analysts.

**We project in the region of 1.5bt cumulative less emissions from now until to 2020, compared to other analysts. This is almost exclusively due to our analysis that electricity consumption will fall by 10% through this decade.**

Yet, against the continuing fall in real electricity consumption to date, most organisations still forecast stagnant or slightly increasing electricity consumption.

As a result, whilst Sandbag's analysis shows the surplus will remain at 2bt until 2020, most analysts forecast the ETS surplus will rapidly decrease.

In addition, Sandbag believes that hedging requirements for utilities will rapidly fall. This is due to (a) rapidly falling emissions and (b) a move from forward hedging to day-ahead hedging because there is only a need to buy/sell electricity when there is low wind/solar, and this can only be done on day-ahead. For example, RWE showed in their 2014 annual report that their coal & gas forward hedging fell from 1.5 years' out to 1.0 year. Other analysts don't assume such a large fall in hedging.

And this all leads to high price forecasts. Price forecasts for a "strong MSR" are €35 for [Tschach Solutions](#) for 2020, €18 for [Point Carbon](#) for 2020, €18 for [Energy Aspects](#) in 2020, and €35 average for Bloomberg New Energy Finance for the period 2021 to 2024<sup>1</sup>.

Sandbag does not currently attempt to forecast precise carbon prices. But it is clear that if a strong, early MSR would maintain a constant 2bt surplus from now until 2020, prices are unlikely to rise significantly higher than today.

Tellingly, the market price has actually fallen from €7.80 to under €7 since the ENVI vote.

**There is a vast ETS surplus now, and it will continue to be vast for the foreseeable future, even with a strong, early MSR. Even with the most ambitious reform currently on the table, the carbon price is unlikely to become expensive.**

---

<sup>1</sup> EU ETS DEEP DIVE: Proposal ENVI in Council (2 MARCH 2015) BNEF, pay-walled