So long. Farewell. ~~Auf Wiedersehn~~. Adieu.

Ulf Erlandsson (*)

We apologize for the somewhat personal tone in the introductory parts of this note. We will get to our usual boring style just below – people really interested in coal auction dynamics are referred to the second section.[1]

However, as a Swedish national, and a bond portfolio manager, my career has been intricately linked to the saga/horror story that has been Vattenfall's German crusade. And now, it is effectively over. Of course, like with the Thanksgiving turkey, there will be trimmings left, but the main parts have entered the digestive tracts. **With the announcement of the results of the German coal decommissioning auction came out on Dec 1, it is clear that Moorburg,[2] the Vattenfall white/coal elephant project that commenced operations in 2015 will stop burning coal before New Year's Eve.** Santa will have plenty of coal lumps to stock socks with this Christmas and the planet will have 6-8Mtpa CO2 emissions less to take care of!

We illustrate the ill-fated Moorburg plant in two pictures below. The first shows (left hand of Figure 1) how the then-CEO of Vattenfall delivers a report to Chancellor Angela Merkel: "Curbing climate change: An outline of a framework leading to a low carbon society"[3]. Long-timers of Vattenfall will surely remember it[4] - construction plans of Moorburg coincided with the production of the report. The misalignment between climate change mitigation talk and actions was never greater, we opine.

Figure 1. Left: Climate horror; Right: Bond horror.

[1] "Hard coal auction", AFII, 1 Sep 2020, gives background to the auction. Next auction round starts 4 Jan 2021.
[2] "Moorburg Power Plant: Reliable Energy for Hamburg", Vattenfall, Jan 2018, provides a good overview of the plant with nuggets such as "Putting the environment first" p. 10 and a quiz with questions like "Did you know why the smoke plume sometimes looks white, sometimes dark?". As a climate horror story, it is a good follow up to the 2012 Vattenfall publication: "Lignite: Energy with a future", available upon request.
[3] "Curbing climate change: An outline of a framework leading to a low carbon society", L. G. Josefsson, European Review of Energy Markets, Vol 1 Issue 2, April 2006.
[4] See "Europe's climate change convert" Financial Times, 24 Jun 2007.

(*) Executive chair, Anthropocene Fixed Income Institute (www.anthropocenefii.org), uge@anthropocenefii.org

Second, to the right in the panel of Figure 1, we illustrate the bond market revulsions post the Moorburg opening: it is a case we often use to illustrate the painful bond market dynamics around 'stranded assets'. In February 2015, Moorburg commenced operations. In March, Vattenfall went on a bond roadshow to sell a new hybrid bond, to the tune of €1.5bn. It became clear during the roadshow that Vattenfall would not disclose the book value of their German coal assets. And lo and behold, after having issued the bond, Vattenfall quickly started writing down coal assets: the bond – rated BBB – fell by 25 percentage points over the course of six months. We argue this might have been one of the worst investment grade bond issuances in the history of global bond markets. And it was a fantastic short.

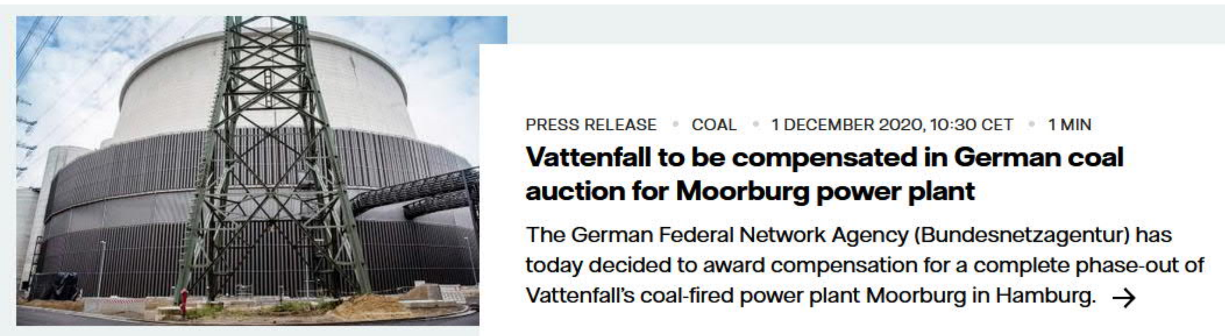
We are grateful for Vattenfall for the number of lessons the Moorburg situations has taught us and are amazed how this story continues to deliver across multiple disciplines. The announcements from Vattenfall on Dec 1 as the results of the auction came through will be very good lessons both for management and corporate communication students for a long time. Even literature students could benefit, especially those studying George Orwell's 1984 discussion of New Speak.

Why? We illustrate the announcement in Figure 2. Background: in the 2020Q2 results, Vattenfall made a writedown on Moorburg of SEK9bn (~€1bn), while also shifting CEO from Magnus Hall to Anna Borg. That is what management students will know as a "kitchen sinking" exercise – you take big writedowns on balance sheet as you switch management teams, or just to prop up the looks of your business in the future. This is Olympics level efforts in that discipline.

For communications: as we will see in the next section, Vattenfall's range of compensation is likely to be in the range of €10-100mn. That is excluding any costs to shut the facility, let us assume those are €50mn[5]. Student of mathematics may want to do the calculation of -€1,000mn +100mn - €50mn = -€950mn. Students of communications/Orwell will see that this almost €1bn loss translates to the headline "German Government Compensates Vattenfall To Close Moorburg".

Let us be clear: the German decommissioning auction is not a happy affair for the involved – the American expression would be that this is a "shotgun wedding." Participants in the auction are competing to get as low as possible compensation for shutting down under the threat of getting nothing or even assume big liabilities. Indeed, we argued back in August that the smartest strategy might be to take zero compensation and leave the keys with the German authorities. We also think it is wisest, communications-wise, to call a spade a spade.

Figure 2. Vattenfall press-release on Moorburg closure. [Link](#).



[5] This may change depending on the court case that Vattenfall is currently working vis-à-vis German authorities: "Vattenfall appeals German court decision over Moorburg plan", Montel 27 Nov 2020, which involves rights of usage of the river Elbe for cooling purposes.

German coal decommissioning auction result

In "Hard coal auction" we discussed tactics for entering into the German coal decommissioning auction. A key insight at that time was that the auction seemed tilted to push foreign owned coal operators to submit bids, and that the ultimate owners of the eligible coal operators in very few cases were public companies. Rather, the key players such as Uniper/Fortum, Vattenfall and Engie are directly government controlled, and many of the other smaller players were controlled by sub-government entities.

We present the results of the auction in Table 1.[6] Let us first say that this was a success from the perspective of German authorities: the auction was overbid and eventual prices/compensation levels came in way below the maximum €165k. From the large operators (>500MW), a total of 4.3GW was accepted for decommissioning, which should be related to the original indicated target of 4GW decommissioned capacity. A total of 4,788MW was given go ahead in the auction: the big players naturally took up most of that. We think 4.8GW less coal in the world is reason to cheer – bravo!

The price range (ie. the compensation sought for closing capacity) was €6k-€150k/MW with an average price of €66k.[7] There will be more disclosures around the final level on 8 December. The implication from the final prices is pretty straightforward: this sets some sort of equilibrium price on coal capacity in Germany right now, which would logically mean that coal operator would need to mark their remaining coal 'assets' in line with these prices. A conservative auditor might even go for the lowest price in the range: this would mean for example that Uniper/Fortum/Finland's remaining coal capacity at 1,517MW would be valued at €6k/MW => €9.1mn. In such a case, one could expect revaluations on those assets to be: Current valuation - €9.1mn. It seems likely that this would mean a write-down, unless that capacity is already marked at zero. Of course, the same goes for the now shut capacity: the current valuation of Vattenfall's 1,600MW Moorburg capacity has to be compared to the achieved bid in the auction minus actual decommissioning costs.

Table 1. Hard coal auction results. This table shows eligible capacity from operators of more than 500MW hard coal, north of the Mainz river as delineated by the Bundesnetzagentur. (*) RWE also won decommissioning of a Ibbenbüren, a 794MW mixed fuel plant that was not included in this table as it was focused on hard coal only. The total decommissioning of RWE capacity in the auction thus came to 1,558MW. Source: Bundesnetzagentur, AFII.

Operator	MW capacity	Ultimate owner/bond issuer	Owner domicile	Auction result (MW)	Remaining capacity (MW)
Uniper	2,392	Republic of Finland	Finland	-875	1,517
Vattenfall	2,164	Kingdom of Sweden	Sweden	-1,600	564
STEAG	1,536	Municipals	Germany	-370	1,166
RWE	764	Public equity market	EU/World	-764(*)	0
TRIANEL	735	Municipals	Germany	n.a.	735
Engie	731	Republic of France (34% vote)	France	n.a.	731
EVN	725	State Niederösterreich	Austria	n.a.	725
Merhum	690	Private entity EPH	Poland	n.a.	690
ENBW	514	State+municipals	Germany	n.a.	514

[6] The Bundenetzagentur press release: "Ausschreibung nach dem KVGB / Gebotstermin 1. September 2020"
[7] This was originally posted on the BNetzA homepage but has since been removed. The "average" is on ly meaningful is fully contextualized, e.g. is it by capacity or by operator or plant?

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“How green bond markets are (not) supposed to work.”, Nov 2020. Link
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Academic/technical papers

“The Green Bond Risk Premium: A Twin-Bond ULFP Approach”, SSRN working paper, Jul 2020. Link.
“Credit alpha and CO2 reduction: A portfolio manager approach”, SSRN working paper, May 2017. Link.

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