

A New Perspective on Electric Power

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Abstract

In the old, physical, way of regarding the Product Electricity; as being similar to water flowing in pipes, the statement “All power mixes on the grid!” held true. However, from a market and consumer power point of view, from an economic view of the product that we purchase (i.e. the Product Electricity), that statement is false. Electricity which is audited; Production vs Consumption, does not mix with any other electricity. Only electricity which is not audited does mix. The anonymous agents which are the carriers of the purchased Product Electricity, i.e. the kWh:s, are mixed. The product itself (the electricity) is not mixed.

This new perspective is not intuitively easy to understand, especially not for electrical engineers or anyone working in the power sector. Nevertheless, it is the correct way to understand the new situation with deregulated power markets offering different “colours” of power, i.e. electricity with different environmental loads.

In this new situation the new perspective on the product electricity shows that there exists a possible choice of not consuming any coal power.

However, the market based methods for reporting purchased electricity do have shortcomings and in this article we propose a concrete solution to the most apparent problem; that it is possible to buy only the Guarantee of Origin (GO), separate from the Product Electricity itself.

The fact that transactions like that are both possible and correct (in theory) they do not increase the acceptance, nor the understanding of how it is actually possible to not purchase and consume any coal power. Furthermore, the ongoing important scientific discussion about consumer power on the power markets is hindered.



Biography:

Per Ribbing received his Licentiate degree in April 2019 after publishing his licentiate thesis: “Climate Change Leadership – the case for Electrification” and is currently writing his doctoral thesis on the same subject: Climate Change Leadership and the role of Green Power in the sustainable transition from fossil to renewable energy. As a Keynote Speaker on the New Paradigm on Electric Power, or Consumer Power in the Power Market, Ribbing has had a number of international missions, e.g. London 2018 and Zürich 2019. In November 2019 he gave Keynote presentations in Barcelona, Rome and Berlin. To all of the conferences he went by train. “Use your brain – go by train” is his favourite one-liner. Sir Ribbing stopped flying in 2011. In 2008 he was invited Keynote Speaker at TIEF-6 in Tsuruga, Japan. He took the train from Stockholm to Japan..

Speaker Publications:

1. Ribbing P (2018) On the Analogy Between the Electric Grid and Our Banking System: Investigating "Consumer Power" in Deregulated Power Markets. Int J Earth Environ Sci 3: 154.
2. Per Ribbing, Mats Leijon (2019) Historic Perspective on The Analogy Between The Electric Grid and Our Banking System. SciEnvironm 2: 133. Burak G., Shuaib L., Hillary M., Susan P. and Karen C., (2017).

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