RWE’s loss follows poor earnings news from Vattenfall, a Swedish utility with the second-biggest generation portfolio in Germany, which saw $2.3-billion in losses in 2013 due to the same “fundamental structural change” in the electricity market. The problem is well documented: high penetrations of renewables with legal priority over fossil fuels are driving down wholesale market prices – sometimes causing them to go negative – and quickly eroding the value of coal and natural gas plants. At the same time, Germany’s energy consumption continues to fall while renewable energy development rises.

RWE’s CEO Peter Terium called it “the worst structural crisis in the history of energy supply”. To make matters worse for utilities, their commercial and industrial customers are increasingly trying to separate themselves from the grid to avoid government fees levied to pay for renewable energy expansion. According to the Wall Street Journal, 16% of German companies are now energy self-sufficient – a 50% increase from just a year ago. Another 23% of businesses say they plan to become energy self-sufficient in the near future.

It’s a real-world example of the “death spiral” that the industry has so far only considered in theory: as grid maintenance costs go up and the capital cost of renewable energy moves down, more customers will be encouraged to leave the grid. In turn, that pushes grid costs even higher for the remainder of customers, who then have even more incentive to become self-sufficient. Meanwhile, utilities are stuck with a growing pile of stranded assets.

When unveiling today’s dismal earnings, Terium admitted that the utility had invested too heavily in fossil fuel plants at a time when it should have been thinking about renewables. Admitting that they had made mistakes, Terium said RWE may have been too late in entering the RE market. As power company executives collectively gnash their teeth, green energy advocates are praising the tumultuous shift these utilities are enduring. Although both sides disagree on the ultimate value of the outcome, the underlying situation is undeniable: Germany is in the midst of a massive “structural” change that is ripping gaping holes in the traditional utility business model. And now the cash is bleeding faster than ever.

In a shareholder document from September 2015, the German utility EnBW illustrated how bad the bleeding has gotten. EnBW has the fourth-biggest generation pipeline in the country, and has been forced to make a serious shift in its own strategy.

Fig. 1 shows how far forward prices for conventional power plant generation have plummeted since 2011. As the profitability of fossil fuel plants continues to fall, EnBW concluded in a strategy document that it needs to develop new business models without delay.

EnBW offered another snapshot of how bad things are getting for utilities. Fig. 2 show the gross margins from coal plants (clean dark spread) and gas-fired plants (clean spark spread) after accounting for fuel purchasing and carbon allowances. Both have taken a serious hit, but natural gas has fared worse as fuel costs remain high and market prices for power fall.

Europe’s biggest utilities are falling down a rabbit hole and could soon find themselves
emergency declarations are the only way some big power companies can ensure their future. The German experience is just the beginning of a long, tumultuous shift for the broader utility sector. But it highlights the question: will Eskom soon deal with the same issues? With much lower penetrations of distributed renewables, Eskom won’t face the same kind of violent death spiral in the near term. But the same forces driving change in Europe should start raising concerns within the utility sector here.

There’s a scene in Alice’s adventures in wonderland when the mock turtle and the gryphon ask about Alice’s exploits. She replies: “It’s no use going back to yesterday, because I was a different person then.” That may be how some utilities in Europe are feeling now – finally reaching the point of no return where looking back is not an option.

Eskom has the benefit of learning from that first-mover experience. Will they use it to land safely in a wonderland of distributed generation and consumer empowerment? Or will they fall down the rabbit hole, not knowing where they’re headed until it’s too late?

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In its own strategy document, EnBW made a simple declaration about its future, stating that conventional business models of larger power supply companies no longer work. By 2020, the utility plans to cut its electricity generation and trading business by around 80% (Fig. 3). It will try to make up for the decline by investing further in wind power, transmission and distribution projects to connect renewables, and by working on the consumer level to implement services like home automation.

Ben Kellison, GTM Research’s senior grid analyst, said that EnBW’s approach provides a window into one possible path in which the value of energy trading and peaker plants systematically erodes, pushing large utilities into more service-oriented work.

RWE is also headed in this direction. The utility, which is Germany’s second-biggest, said in 2015 that it was planning to divest many of its large-scale fossil fuel plants and implement a “prosumer” business model to help integrate renewables projects. These

swimming in a pool of their own tears. Many of them already are. Over the last five years, the top 20 utilities in Europe have lost half their value. Recent poor financial results, stranded assets and mass selloffs of power plants highlight how tough things have gotten for power providers. But there are signs of change.

Fig. 3: 2020 targets for EnBW.

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