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19 May 2016

Re: Submission regarding the impact of repealing the nuclear operating tax on Swedish energy investor confidence and financial status of the Swedish windfarm industry.

Dear Mr Chairman,

This letter has been prepared on behalf of a group of leading Swedish windfarm investors and owners, including Vasa Vind, Rabbalshedekraft, Stena Renewables, Arise Wind Power, Platina Partners, John Laing and HgCapital. These investors and owners have invested in or operate over 1500 MW of Swedish windfarms, accounting for approximately 30% of installed and operating Swedish wind capacity. This group, and its lenders, have invested in excess of SEK 20 billion in Swedish wind farms. Members of this group have previously collaborated with Ernst & Young and the Government to produce an evidence-based report on the cost of Swedish wind energy "*Levelized Cost of Energy for Swedish Wind Farms – An Empirical Study*" dated April 2015 and presented to the press and members of the Swedish Parliament in Stockholm on 6 May 2015.

The purpose of this letter is two-fold.

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First, to bring to your attention the possible adverse effects on investor confidence in the Swedish renewable and conventional energy markets should the Commission recommend to the Swedish Government the cancellation of operating taxes on the Swedish nuclear fleet. Wind investments were made based on a stable regime and a transparent power market free from government interference or distortion, including energy tax policy.

Second, to inform you of the parlous financial state of the vast majority of Swedish windfarms that have been built under the Elcertifikat regime. Since between 2007 and 2014 approximately SEK 61 billion was invested in Swedish windfarms under the Elcertifikat system, with the expectation of a stable power and Elcertifikat pricing environment. This has not occurred and we conservatively estimate that SEK 61 billion of investment is currently worth, on average, less than SEK 40 billion. Equity investors have suffered severe impairments on their investments, and the banks that lent to those projects, including all of the major Swedish lenders, are facing loan provisions and losses.

Nuclear tax repeal

It has come to our attention that the Commission is considering recommending that the Swedish Government repeal the SEK 0.06 per kWh nuclear operating tax that has long been a feature of the Swedish tax system. We have also noted the editorial that appeared in Dagens Nyheter on 9 April 2016 by Vattenfall and E.ON calling for the tax to be repealed so as to return Sweden's existing operating nuclear fleet to profitability. In so doing, they make the assertion, as other utilities have made across Europe, that failure to repeal could cause the closure of Sweden's nuclear capacity, threatening Sweden's security of supply.

The threat of "the lights going out" is always a potent one and is usually guaranteed to assure governmental action as no politician wants to have that happen on their watch. We would note, however, that the Nordic markets, including Sweden, and in fact all of Europe, are awash in excess power generation capacity and are well interconnected. Utilities in Northern Europe, particularly Germany and France, have been making similar arguments to secure capacity payments for their aging and uneconomic coal, gas and nuclear fleets in the face of increased penetration from renewables.

Despite these arguments for several years and the lack of action from European Governments, the lights have not gone out and the risk, in our opinion, is overstated. Rather, this plea for capacity payments, much like the plea of Vattenfall and E.ON to repeal

the nuclear tax, is in the best financial interests of those companies and not necessarily for the power system or consumers. In addition to this thinly disguised plea for subsidy, repealing the nuclear tax would, in our opinion, be a devastating blow to the already shaken investor confidence in the Swedish electricity sector.

Investors like ourselves were attracted to the Swedish energy market, and particularly to Swedish wind, because of Sweden's strong macro-economic fundamentals, regulatory stability and transparency, and a liquid power market in which the market makes decisions as to how to reward power generation largely unfettered by government intervention.

In recent years, however, that transparency and stability has been threatened in several ways, including:

- Sweden's unwillingness to fully adjust the "quota curve" for Elcertifikats necessary to eliminate the vast surplus in Elcertifikats occasioned by the Swedish Government's fundamentally flawed forecasts of future Swedish power demand against which Elcertifikat requirements are measured. This has led to a virtual collapse in Elcertifikat prices.
- The decision in 2015 to change the property tax rates for windfarms, which are costs that cannot be passed on to consumers and have further eroded the profitability of windfarms in Sweden.
- The removal of deductibility of interest on shareholder loans which have been used by many windfarms as a part of financial structuring in Sweden, again causing financial losses resulting in increased costs that cannot be passed on.

We also note that Sweden has acquiesced in actions by Norway that are distorting the Elcertifikat market and reducing Elcertifikat prices, specifically:

- The Norwegian government's grant of Elcertifikats to pre-existing hydroelectric projects representing production of about 10% of the joint Swedish – Norwegian *new renewable energy installation target*. This represents a grant of incompatible state aid under both EU and EEA rules.
- The Norwegian Government's overt state-aid support of the Fosen wind project in Norway, which at 1000 MW represents about 10% of the joint Swedish-Norwegian

new renewable energy installation targets. This occurred after Statkraft announced over a year ago that the project was uneconomic, and was heavily criticized by the Norwegian government because it was seeking targeted economic development in the Fosen area. This project is being built with capital provided by the Norwegian Government, grid extensions funded by state-owned Statnet subsidized grid charges not available in Sweden, and with an unprecedented 20 year power sales agreement with a municipal-owned utility.

It is in the context of these direct and indirect changes to the Nordic power market that any repeal of the nuclear operating tax must be reviewed. As noted above, the transparency and lack of government interference in the Nordic power market has been a critical factor in domestic and foreign investors' decisions to invest in Sweden. We perceived a level playing field with utilities.

Because of the highly liquid nature of the Nordic power markets, the long term revenue certainty from power sales that has been achieved in other markets through feed-in tariffs is lacking. The Elcertifikat system, again, is contributing additional market risks. Those who have invested have expected this to be compensated by Swedish political stability.

We now see this stability fading. First, in our view, through the flawed implementation and management of the Elcertifikat system. Second, by what appear to be more significant changes and interventions in the power market itself.

Because long term price certainty is not available in the Nordic market, investors such as ourselves have had to look to expert market forecasts to determine the likely long term pricing that we will achieve in our windfarms. We fully accept that those forecasts may be wrong and that prices may rise or fall. For example, those forecasts did not adequately foresee the financial crisis and its aftermath or the rapid increase in Swedish wind projects, adding to a surplus of power and decreasing prices. However, those reports are rationally based. In arriving at those long term forecasts, the experts rely on known data, such as the historical capital and current operating costs of a variety of power plants, identifiable long term trends in plant, equipment and costs, supply and demand and the impact of the regulatory regime, including taxes.

In recent years, the long-telegraphed closure of ageing Swedish nuclear power has become an essential part of those forecasts and informs investors and experts views on prices and

price formation post 2020. Those reports take into account nuclear taxes as a factor in determining the longevity of nuclear power plants and what the supply and demand balance will be. Because investors must rely on these reports when making their decisions on Swedish wind, changes in tax policy, such as the proposed repeal of the nuclear operating tax, can materially affect the supply/demand balance and hence the level of price risk and prices that investors can expect at the time of investment.

In short, the repeal of the nuclear operating tax is clearly intended not only to restore profitability, but to extend the economic life of those nuclear plants and provide a windfall profit to the nuclear owners. As has been noted in several reports, the supply of nuclear power is a critical factor in determining market prices in Sweden and is a key factor in determining prices. Extending the economic life through a tax repeal will keep the nuclear power plants online for longer, exacerbating the oversupply situation in Sweden and depressing prices. This is wholly inconsistent with investors' rational expectations about Swedish energy policy and it reflects an intervention into the Nordic power price market which will distort pricing in favour of nuclear power generators and to the detriment of wind generators.

The Commission and the government should see this intervention as an indication of regulatory instability in what had been perceived as a stable market and, in our view, is likely to harm investor confidence in future investment in the Nordic power sector. To date, Nordpool has been an exemplar of a true power market where prices are set by the market and not through regulatory intervention. The repeal of the tax effectively embroils the Swedish Government in that market and distorts it, which is not what investors expect.

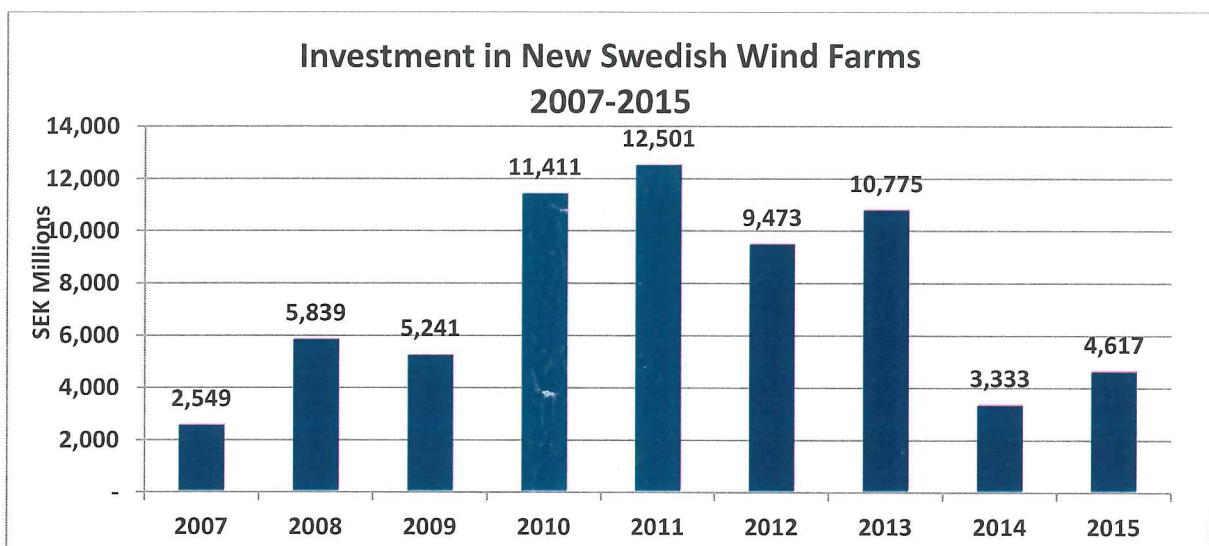
State of the Swedish wind industry

We believe one of the reasons that Vattenfall and E.ON are arguing so intently for removal of the nuclear tax is to avoid any further financial impairment of their nuclear assets which affects their corporate profitability. In an Article published in SvD on 25 May 2015, analysts at Swedbank and Danske Bank reported that Vattenfall valued its nuclear assets at SEK 35 billion. That article reported a risk of impairments of SEK 5-10 million. It is understandable that they would seek a repeal of tax to avoid further impairment losses.

However, as noted above, repealing the tax is, in our view, likely to reduce future power prices, not only for wind generators, but all generators, which in turn will drive down the

value of those assets and create more impairments. The wind sector will be particularly hit, as it is already suffering from power and Elcertifikat prices that are substantially lower than forecast, which has led to financial stress on the participants in this letter and others in the Swedish wind sector.

According to Bloomberg New Energy Finance, the leading global data source for renewable energy and cleantech investment, over SEK 65 billion was invested in building new Swedish wind farms from 2007 through 2015.



Source: Bloomberg New Energy Finance

We estimate that at least SEK 20 billion of Swedish wind investments have been written off due to this low price environment. If the tax repeal proceeds and power prices remain lower for longer, which we believe will occur, the impairments will be even higher.

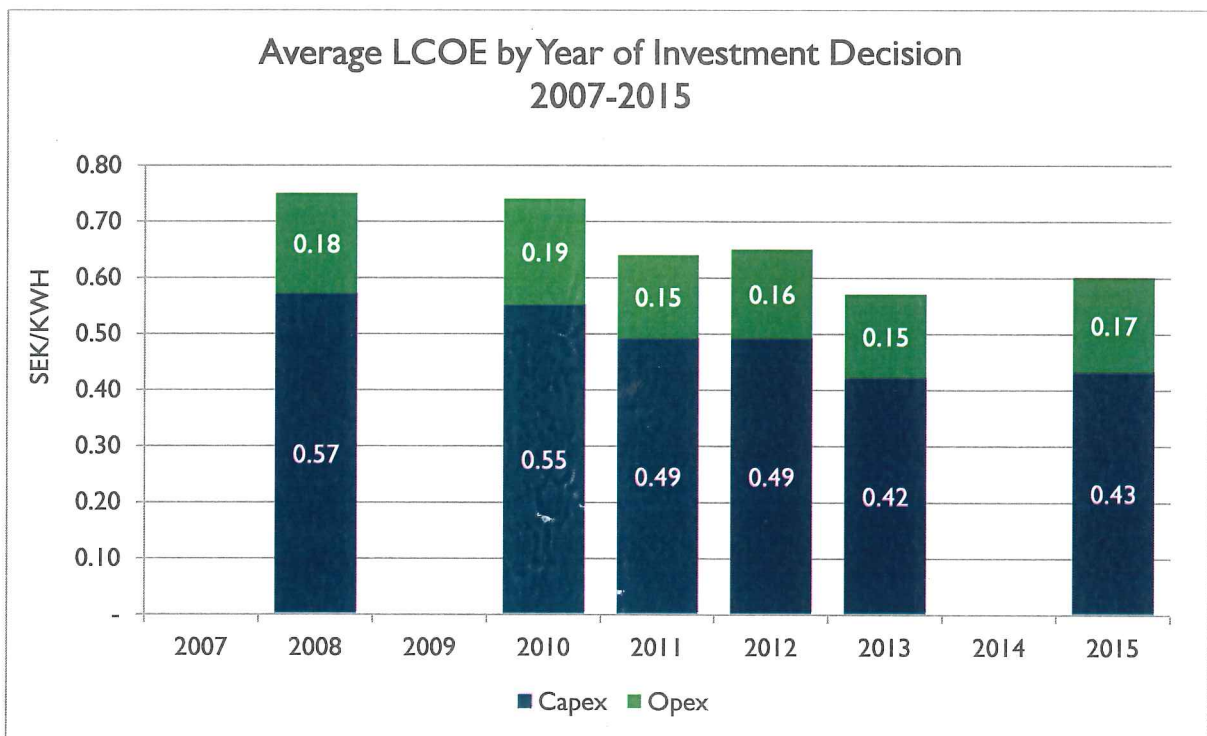
This affects not only equity investors in these windfarms, but also European banks, including many Swedish banks who have lent to windfarms who are, or soon will be, unable to serve their debt.

For example, in the press the following impairments have been announced:

- Statkraft (NOK 1.7 billion) impairment on its Swedish wind investments as of December 2015
- PWP Wind Power (EUR 30 million) loss on windfarms reported in the press

- Arise Wind Power (SEK 159 million) operating windfarm impairments reported in 3rd quarter 2015
- The other participants in this letter have reported impairments of approximately SEK 900 million

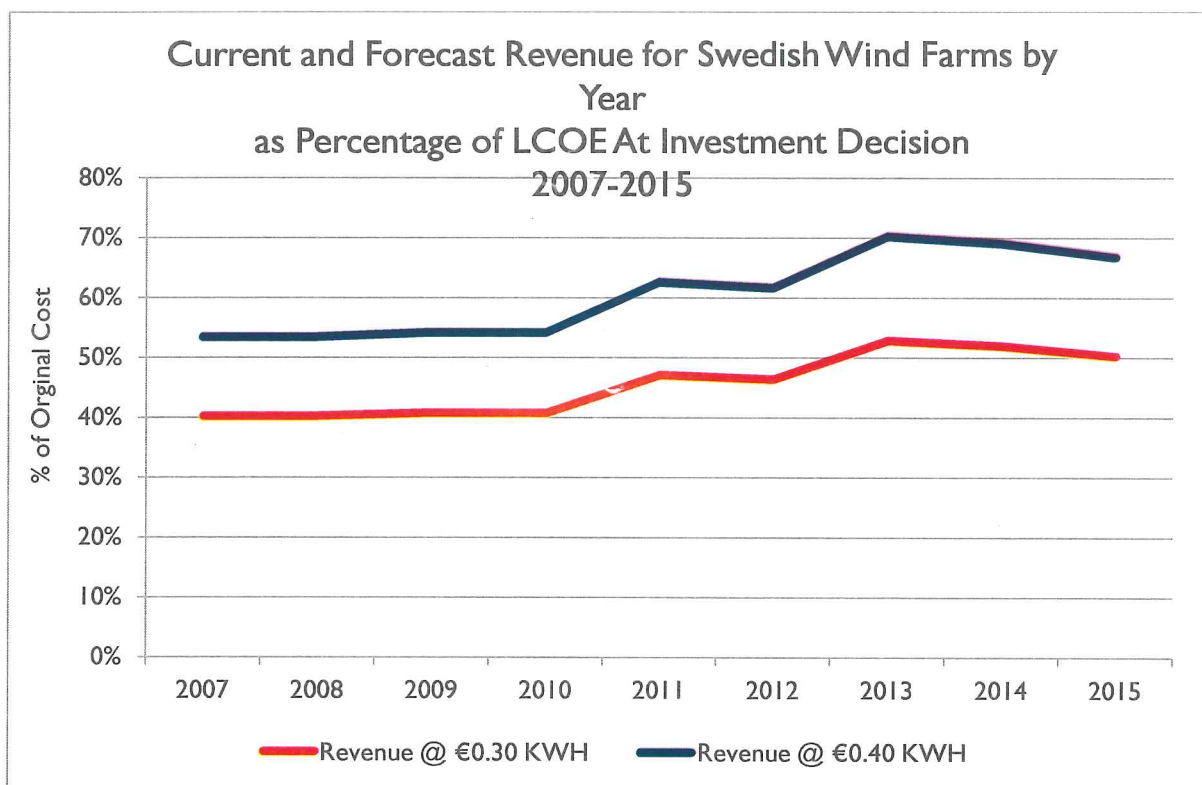
The numbers are simple. Using the Ernst & Young report on the levelized cost of energy (a copy of which is attached), the average levelized cost of energy of windfarms built between 2008 and 2015 ranged from 0.75SEK/kWh to 0.60SEK/kWh, as shown in the following table. As these are averages, there are individual projects with higher and lower costs



Levelized cost of energy (LCOE) is the remuneration required from the sale of power and Elcertifikats in order for a windfarm to pay its operating costs and to repay its upfront capital at an agreed rate of return, in this case an 8% weighted average cost of capital.

Generally speaking, starting in 2008 wind farms secured prices hedges for power and Elcertifikats for periods of 3-5 years. These hedges started to expire in 2014 and 2015, and with each passing year they are being forced to re-hedge at today's much lower prices.

Current spot and forward market prices for power and Elcertifikats suggest that for the next 5 years or possibly more, wind farms will receive between 0.30-0.40 SEK/kWh. As these hedges expire, this means Swedish wind farms are receiving, or on average will receive, revenues 40-55% below their LCOE, increasing equity and debt impairments. This is shown in the following table:



Applying a simple methodology, if the current and forecast prices are less than 40-55% below the LCOE, then the value of the original investment is reduced by the same percentage. Thus, looking at the investments made year by year from 2008 through 2015, as shown on the following table, these investments have been impaired by 40-55%. Applying the Bloomberg investment numbers, this means that the SEK 65 billion of reported investment is now worth between SEK 35-40 billion - losses far greater than the nuclear industry's.

The low revenues and losses are being carried over into the Nordic banking sector. We believe that about 70% of the investments in Swedish wind were financed with bank project finance in addition to sponsor equity. The typical Swedish wind debt financing is for 12-15



years and given the years in which the financing was made, the debt service requirements equal about SEK 0.28 to SEK 0.37/kWh. Debt service comprises both interest and principal repayments in roughly 50:50 proportions in the first 5 years of a project's life (with capital repayments increasing as a % of the total over time). Thus, at the current revenue levels of SEK 30-40/MWh, with average operating costs of SEK 0.15-0.20/kWh and average debt service of SEK 0.28-0.37SEK/kWh, projects are becoming unable to pay operating costs and debt service, a number that will grow as hedges run out.

Assuming 70% of the SEK 65 billion was in bank financed projects, using standard debt-equity ratios, this means that about SEK 35 billion of debt is or will be non-performing, and that the equity invested in those projects is worthless. Although not all of the debt will be written off, the banks, many of whom are Swedish, are looking to incur substantial losses on these loans. Obviously, removing the nuclear operating tax is likely only to exacerbate this problem and push more projects into financial distress.

We know safe, secure and low carbon energy is critical to Sweden, but removing the nuclear tax to benefit one class of investors, who made their investments decades ago and have, in our belief, more than recovered the costs of that investment, and to shift the burden on to new investors who have come to Sweden in good faith and in the belief of a transparent market, is misguided. It is unfair to wind, it is unfair to new investors and, if pursued, is likely to result in substantial damage to investor confidence.

Further, and we do not expound on it here, the Commission should consider whether removing the tax on nuclear could be viewed as a grant of incompatible state aid to the Swedish nuclear industry and would have to be cleared by Brussels.

Thank you for the consideration of our materials and we would be more than happy to meet with you to discuss our position and the implications of repealing the nuclear tax on investor confidence and the current state of the Swedish wind market.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Thomas S Murley".

Thomas S Murley

On behalf of: Vasa Vind, Rabbalshedekraft, Stena Renewables, Arise Wind Power, Platina Partners, John Laing and HgCapital

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