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REFORM OF THE EU RENEWABLE ENERGY DIRECTIVE: PUTTING THE BRAKES ON THE EUROPEAN ENERGY TRANSITION?

AT A GLANCE

The EU directive on renewable energy was very successful. The basis for this success was the member states' freedom to select the most appropriate instrument for funding renewables. However, the European Commission would like to compel the member states to use only tender systems and proposes further restrictive criteria for renewable energy policy. This about-face harbours substantial risks and is based on scientifically dubious arguments.

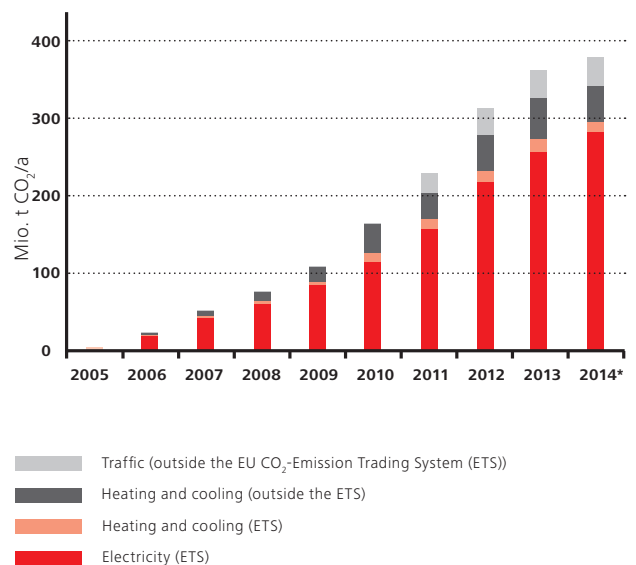
The 2001 EU directive on the promotion of electricity produced from renewable energy sources in the internal electricity market (2001/77/EC) (hereafter: the »Renewable Energy Directive«) is most likely the European Union's most successful climate protection measure. By increasing the proportion of renewables in the EU from 8.7 per cent in 2005 to around 17 per cent in 2015 greenhouse gas emissions were reduced by a good 360 million tonnes (Figure 1). But the European economy has benefited, too. For example, renewables provide around 1.2 million future-oriented jobs within the EU. They also contribute towards ensuring security of supply, development, and growth of industry and innovation. They also support the creation and securing of competitiveness, the reduction of the EU trade deficit in the energy sector and the aim of lower energy costs.

SMASH-HIT EXPORT FEED-IN SYSTEMS

In light of this success, just under three-quarters of the 600 or so actors who participated in the European Commission's official consultation process on the Renewable Energy Directive took the view that the existing Directive has been a success, including the free choice of instruments. In particular the feed-in systems in Denmark, Germany and Spain, under which the government or the parliament defined the level of payments, have experienced considerable international attention.

Worldwide they have been adopted, in broad outline, by dozens of states. In 2012, 24 EU member states were still using a fixed-price feed-in system, nine used a premium feed-in system and only three used a tender system.

Figure 1
Savings of greenhouse gas emissions by expanding renewables in the EU since 2005



* Estimate
Source: Own display, cf. Nestle 2017: 17.

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THE EUROPEAN COMMISSION'S ABOUT-FACE

However, some actors have been criticising the Renewable Energy Directive for years, in particular the feed-in systems for green electricity plants that have become widespread in the wake of the Directive. To date, the Renewable Energy Directive has provided for their use – explicitly on the basis of its underlying principle of freedom of choice of instrument. The criticisms have hit home, however. Since 2014 the European Commission, in its guidelines on state aid for environmental protection and energy (EEAG), has stipulated basically that in future tender systems will be used – feed-in systems are thus by and large no longer possible.¹ In this way the European Commission is forcing the vast majority of EU member states, at the latest within the framework of the next major adjustment, to shift their systems for funding green electricity plants to a tender system.

With the draft amendment of the Renewable Energy Directive, which the Commission presented within the framework of the »Clean Energy for All Europeans« package, it is seeking to enshrine this compulsion to adopt tender systems and also obtain the approval of the European Council and the European Parliament. Not only that, but the Commission aims to nail down a fundamental compulsion to use technology-neutral and cross-border tenders and thus to further squeeze member states' policy space. This is a clear and massive deviation from the existing principle of freedom of choice of instruments. Furthermore, the Commission would like to abandon the obligatory national targets for expanding renewables that have been a key component of the Directive since its 2009 amendment. This pressure emanating from Brussels handed member states additional arguments and bargaining power to use against those political and economic actors who were sceptical about the rapid expansion of renewables, such as traditional energy providers.

Whereas the EU has to date given member states the freedom to decide how they would meet their mandatory targets, the Commission would now like to abandon the pressure for policy commitment to renewable energies and at the same time narrowly restrict the member states' options in that regard.

THE RISKS OF THE ABOUT-FACE

Given the challenges of climate protection and the international obligations under the Paris climate agreement an expeditious expansion of renewable energies is urgently required. This also applies to the achievement of other economic and political goals. With a tender system, however, exceeding the tendered expansion volumes is inherently excluded, while achieving the expansion targets and the climate goals is not guaranteed. This is because whether the power plants that have won the tender are actually built is decided by the investors alone. This jeopardises the actual achievement of EU climate protection goals.

Specifying a uniform instrument and technology-neutral and cross-border tenders obscures the fact that the member states' political, economic and environmental circumstances differ considerably. Because Europe is extremely heterogeneous the tender system is not necessarily the best option for all member states. Furthermore, given that using the most appropriate instrument may no longer be permitted, there is a danger that the

CLARIFICATION OF TERMS: RENEWABLE ENERGY FUNDING SYSTEMS

SYSTEMS WITH PRICE CONTROLS

Feed-in system with fixed payments (fixed-price feed-in system)

In fixed-price feed-in systems fixed payments per kilowatt hour of electricity supplied are determined by the state, in other words, administratively. They are independent of short-, medium- and long-term electricity prices on wholesale markets. The operators do not have to put their electricity on the market.

Feed-in system with premiums (premium feed-in system)

A premium feed-in system for electricity from green electricity plants also involves the state determining payments. However, this does not cover all the electricity generation costs. Rather the power plant operator has to market the green electricity it generates and thereby obtain additional revenues. Only in this way can a power plant be profitable.

→ Both feed-in systems involve price controls and thus intervention in the workings of the market, so that the newly expanded capacity of green electricity plants can compete on the market.

SYSTEMS WITH QUANTITY CONTROLS

Tender system

In a tender system an installed capacity or a quantity of electricity can be tendered for. The successful providers receive payment for the installed capacity or the quantity of electricity supplied. This payment can cover the total costs – or only part, with the electricity also sold on the market. The key difference from the abovementioned price control instruments is that the level of the payments is not determined by the state, but through the tender process.

Quota system

In a quota system certain actors in the electricity market – for example, electricity providers – are required to generate a certain proportion of the electricity they sell from renewable energies. Generally, this is tied to a certificate system. The certificates are tradeable. That means that actors under the relevant obligation do not have to generate the requisite green electricity themselves, but can obtain certificates on the market to meet their obligations.

→ In the case of the tender and the quota systems the state intervenes in the workings of the market by establishing the extent of the expansion of green electricity, while the price is set by the market.

expansion of green electricity may stall, CO₂ emissions may not be reduced as much as might otherwise would have been possible, domestic jobs may be lost, fewer innovations may be implemented and overall costs may increase.

WEAK ARGUMENTS FOR THE ABOUT-FACE

Given the great success of the Renewable Energy Directive, its broad approval among most actors and the risks entailed by changing direction, any fundamental changes have to be very well justified. In what follows, therefore, we briefly discuss the arguments adduced for the fundamental policy change. The upshot is that the reasons given for it do not hold water.

MARKET INTEGRATION

The premium feed-in system constitutes a price control instrument by means of which electricity from green electricity plants is integrated in the existing electricity market in key respects. EU member states have increasingly been adapting their fixed-price feed-in systems to this market-based instrument.

COSTS

Europe's power plants are outdated to a considerable extent; not only that, but they need to be replaced fairly rapidly for climate protection reasons. Given the significant fall in costs, electricity from photovoltaic and wind energy plants is generally no more expensive than electricity from new conventional power plants; indeed, in many cases green electricity is markedly cheaper. In other words, costs cannot be used to justify restricting the expansion of cheap technologies.

The Renewable Energies Act levy applied in Germany and the green electricity levies imposed by other EU member states exaggerate the real costs of expanding green electricity considerably. Furthermore, these levies give no indication of whether the current expansion of green electricity is costefficient or not. The lack of a proper official indicator with regard to current expansion costs hinders informed debate on finding the right instrument.

GRID BOTTLENECKS

Existing grid bottlenecks cannot be brought forward as a reason for restricting the expansion of green electricity either, taking into consideration the three main energy policy objectives (price efficiency, environmental sustainability, security of supply). After all, it would undermine the policy incentive for grid expansion. It is also questionable whether restricting green expansion is a macro-economically efficient solution to the grid's problems. For example, it is likely to be cheaper – besides accelerated optimisation of the grid and of grid expansion – to directly use otherwise curtailed green electricity in new areas of application, in temporary storage, or for conversion into hydrogen or synthetic methane (sector coupling).

COMPETITION

The intense global competition among the manufacturers of green electricity plants and project developers has led to astonishing technological development and a significant fall

in costs. This competition was created in particular by feed-in systems. Competition between green power plants and conventional power plants, as well as between the various green electricity technologies, by contrast, makes no sense, given the policy goal of expanding green electricity. After all, this policy goal means that new wind energy and photovoltaic plants must be added – regardless of whether the existing or future market alone sends out sufficient investment signals.

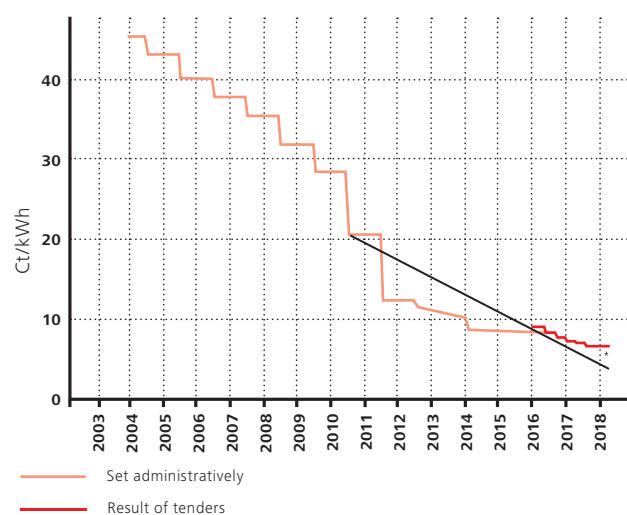
THE SINGLE MARKET

Since wind and photovoltaic are dependent on weather conditions and fluctuating, they are hardly able to react to short-time price developments. It is, therefore, not yet foreseeable, if there will ever be a single market for both fluctuating renewable energy sources and flexibility options, such as load management, gas turbines and storage facilities. That means that it makes no sense to arrange the funding of wind and photovoltaic plants in such a way that they would be fully integrated in a future market. As it remains entirely unclear whether such a market will even exist or what it might look like. Specific funding of fluctuating green power plants is likely to continue to be necessary over the long term, as long as electricity markets are unable to send the requisite price signals on funding them. A conversion to fixed or capacity premiums would not be wise, either.

EXPERIENCES WITH TENDER SYSTEMS

International experience indicates that instruments of quantity control, such as tender or quota systems, are not inherently better for achieving energy-policy objectives than price control instruments, such as – in particular – premium feed-in systems. More decisive is the design of such instruments. Recent experiences with tenders for ground-installed photovoltaic plants and onshore and offshore wind energy in Germany, too, make it impossible to conclude, for various reasons, that they have led to lower rates – in comparison to feed-in systems (Figure 2).

Figure 2
Rates under the Renewable Energy Act for ground-installed photovoltaic plants before and after conversion to a tender system



* Note: The thin black line from 2011 to 2018 represents and extends the linear trend from 2011 to 2016.

Source: Own display, cf. Nestle 2017: 21.

TECHNOLOGICAL NEUTRALITY AND CROSS-BORDER FUNDING

In an electricity environment in which fossil-fuel power plants in many areas are being displaced and renewable energies are supposed to take over the bulk of electricity provision it is unrealistic to concentrate green electricity production on the few very good locations or the EU. In most EU member states various green electricity technologies have to be used. That means that there is no point insisting on technology-neutral instruments or cross-border funding. The latter is also likely to be highly detrimental to acceptance of the energy transition. After all, a country's electricity consumers or taxpayers would have to finance the expansion of green power plants in another country – without benefitting from local value creation, jobs or reduced energy import costs. Use of the best locations and the best technologies should thus continue to be voluntary.

THE DRAFT RENEWABLE ENERGY DIRECTIVE VERSUS CLIMATE PROTECTION

The arguments concerning why the EU should take away the member states' freedom to use the instrument for funding green electricity that suits them best do not hold water scientifically. The same applies to the additional pressure for technology-neutral and Europe-wide tendering. The challenges posed by the climate crisis, by contrast, are an important argument why the member states should continue to be given the widest possible leeway. This would also include the possibility of further use of price control instruments. That would be a major advantage with regard to climate protection and complying with other EU energy policy objectives. As only they can facilitate an expansion of green electricity that goes beyond the politically defined minimum goals.

PRACTICAL RECOMMENDATIONS

The European Commission's about-face threatens to significantly impede the European expansion of green electricity, especially due to the abandonment of mandatory expansion targets for the EU member states. In order to ensure that the expansion of green electricity continues throughout Europe – and not only in a few pioneer states, such as Germany – the German government should advocate the following in the European Council and against the Commission:

- As was the case under the Renewable Energy Directive 2001 and its 2009 amendment every EU member state should continue to have a free choice of the optimal funding instrument for green electricity plants in accordance with national circumstances. Because such a free choice improves the possibilities for rapid expansion throughout the EU it would be good for Germany even if the German government wanted to retain the tender system that it has just introduced. Furthermore, more room to manoeuvre would enable the EU member states at a later date to abandon the tender system if this seems reasonable in the case of particular technologies, including in Germany. This might be useful if

in a few years' time it turned out that the tender system cannot achieve the relevant goals in the case of certain technologies. The Commission's draft for a new Renewable Energy Directive seeks to block this.

- The member states should likewise be given the freedom to undertake, as used to be the case, technology-specific funding of green electricity technologies.
- Improved voluntary options instead of pressure towards cross-border financing.
- In order to maintain robust information that is comparable between the member states on the costs to consumers arising from the current expansion of green electricity plants, the Commission should develop proper cost indicators and make them officially available. This step would move the current focus of the debate away from renewable energy levies, which are unsuitable cost measurements.

In order to take up these points effectively at the European level, the German government should form coalitions with other member states and agree on a common strategy at a high political level. This has proved very successful in the past. Because the draft amendment of the Renewable Energy Directive is strongly imbued with a free-market spirit the German government should also launch a political debate in which the specific role of the market and of the Single Market in the medium- and long-term conversion of EU energy provision can be discussed in an unbiased way. The debates on the clean energy package could present a favourable opportunity for this.

Author

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Note on the text

This text summarises the findings of the following study written by the author: Uwe Nestle 2017: Reform der EU-Ökostromrichtlinie: Bremse für die europäische Energiewende? [Reform of the EU Renewable Energy Directive: putting the brakes on the European energy transition?], WISO Diskurs, Bonn.

Notes

1 – Already in the 2013 coalition agreement the German government made a firm commitment to the conversion to a tender system, which was implemented with the Renewable Energies Act (EEG) 2017.

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