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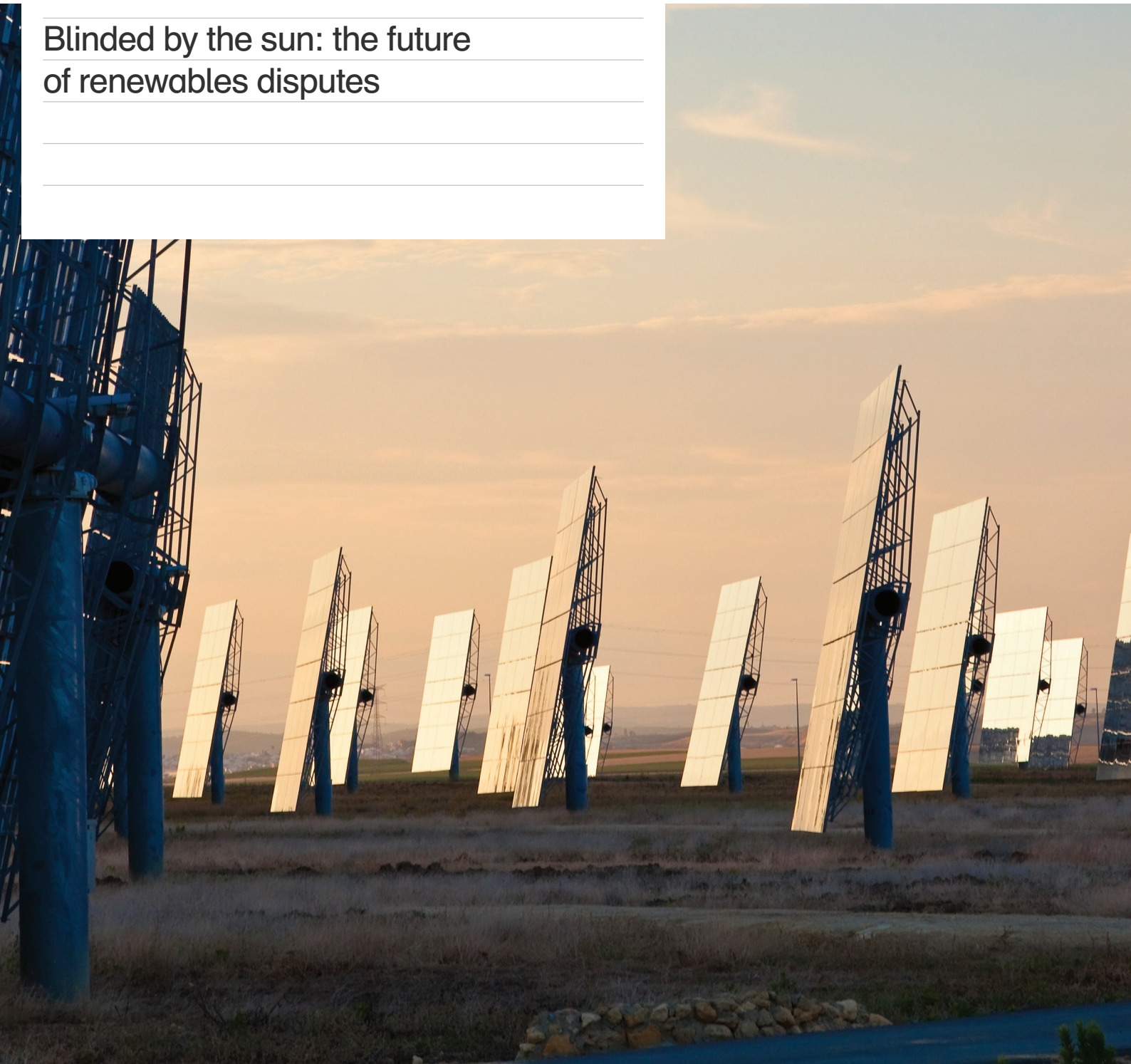
Blinded by the sun: the future of renewables disputes



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The deployment of renewable energy technologies looks set to continue to grow. However, it can be challenging to integrate these technologies into existing policy frameworks and energy systems. Renewables have also been prone to legal disputes, as illustrated by recent cases brought against the Spanish government. As such disputes become more commonplace, a range of economic, financial and public policy issues will need to be examined

In Europe, the generation of power from renewable energy sources (RES) has expanded at a rapid pace in recent years. In 2017, 85% of newly installed power capacity in the EU was from renewable sources, and for the first time electricity generated from renewables (wind, solar and biomass) overtook that generated from lignite and hard coal.[1]

The policies of the EU and its member states, such as the mandatory renewables targets in the EU Renewable Energy Directive (RED), have played a major role in driving the increasing penetration of RES in the European energy mix. All EU-28 countries are subject to final energy targets for 2020 that were set under EU Directive 2009/28/EC, and some governments have chosen to adopt even tougher targets.[2] In January 2018, the European Parliament voted for a new European Renewable Clean Energy Target of 35% by 2030 for the overall energy mix, which will drive further penetration of renewables in the long term.

To meet their targets, governments have developed a variety of incentives and subsidies to encourage the deployment of renewable energy technologies and their connection to grids. However, as the costs of renewables have declined, so have the subsidy payments necessary to make these projects of interest to investors. In 2017, the world's first offshore wind farm without subsidies was tendered in Germany.[3]

Unsurprisingly, the rapid growth in the share of RES generation has not been without its challenges, and there have been many investor–state disputes relating to investments in the renewables sector. This article provides a background to these disputes, discusses the key underlying economic issues, and highlights trends that may lead to similar or new disputes in future.

The challenges of RES

Although renewable energies comes from a wide variety of sources—wind, solar, wave, tidal, hydro, and geothermal—they all share several features that make them especially prone to disputes.

First, renewable generation assets are capital-intensive: they have high upfront 'sunk' costs, and low (close to zero) variable costs once constructed (as there are no fuel costs). This means that once a renewable generation asset is developed, even if its revenues fall substantially, it is still commercially attractive to continue to operate it.

Renewable generation assets typically have long asset lives—and rely on being operational over long periods of time (i.e. decades) in order to recover the upfront investment costs. From the perspective of investors, in order to mitigate the risk of not recovering the fixed costs of a renewable generation asset, a long-term contract with a customer is typically required to ensure that the return on investment will be sufficient given the risks involved. However, as the renewable generation plant will generally continue to operate even if the contractual price falls, once the plant is built, there is a risk that the customer will renegotiate the contract, especially if the costs of competing sources of energy become significantly cheaper. RES is therefore susceptible to this 'hold-up' problem by the customer.

Second, the costs of RES are falling fast while their technical capabilities are developing rapidly. Renewables technologies are also being deployed in new markets where the operating environments are more extreme (for example, in the case of offshore wind). As a result, there are considerable risks in investing in renewable energy assets.

Third, the output from RES is often dictated by changes in weather and climate, and is therefore unpredictable. This variability increases the costs of integrating renewables technologies into the wider electricity system, due to a requirement for more transmission network capacity, greater demand-side flexibility, more storage capacity, and the retention of some flexible (or controllable) non-renewable plants as a back-up. For example, the utilisation of such non-renewable back-up plants could be low over extended periods of time, making the overall unit cost of electricity higher than it otherwise would be.

In markets with limited experience of renewable energy technologies, the scale of these 'hidden costs' is often difficult to estimate. Policymakers looking to attract investment in renewables may therefore regret having committed to ambitious renewable energy expansion programmes because of the greater than expected costs.

In liberalised markets, where wholesale electricity prices vary hour by hour, large quantities of renewable generation at a given point in time (for example, due to high winds) can decrease the average wholesale market prices enjoyed by all types of plants, including energy from renewable sources. Depending on the design of renewable energy support schemes, this may increase the need for renewables subsidies. It may also trigger the need for state support for non-renewable plants (for example, in order to protect the jobs of people working on these plants).

As a result, in markets with RES subsidies and ambitious renewable targets, the rate of growth of subsidy payments may eventually be greater than the rate of growth of renewable generation. This raises questions over the cost-effectiveness of renewable energy altogether.

Given the haste shown by some governments to expand RES capacity and the RES challenges highlighted above, it is perhaps unsurprising that the number of renewable energy disputes has increased. The recent cases brought against the Spanish government by investors in solar photovoltaic (PV) projects illustrate this point.

Spain's Special Regime

In 1997, Spain developed a 'Special Regime' with the Electricity Sector Law (Law 54/1997) to stimulate solar PV investments. The Regime was altered in 2004 to improve the stability of the tariffs (RD 436/2004), and again in 2007, this time to introduce best-practice feed-in tariff (FiT) design elements (RD 661/2007).[4] Under the amended regime of 2007, new solar PV energy generators would benefit from, among other things, a generous FiT for a 25-year period (revised every four years), after which certain generators would continue to benefit from approximately 80% of the original FiT rates for the lifetime of the facilities.

Starting in 2010, Spain enacted a series of reforms to the Special Regime as the costs of the associated subsidies rose dramatically—in large part due to the growth of the subsidised solar PV installation.[5] These reforms included:

- the termination of the FiT after 30 years;
- the introduction of a new remuneration regime in respect of the FiT based on the hypothetical 'efficient' costs of PV plant that would ensure a 'reasonable return' to investors;
- a limit on the operating hours of the plant;
- a charge to access the transmission grid;
- a tax on energy supplied to the electricity grid.[6]

The reforms culminated in a moratorium on support for new solar PV in 2012.[7]

As a result of the changes, foreign investors brought over 40 individual claims against Spain under international arbitration under the Energy Charter Treaty. The claimants essentially argued that they reasonably relied on inducements and promises by the Spanish government, which conferred immutable economic rights protected by the Treaty.

Several awards have been made to compensate the investors in these claims. These awards have clarified several issues relating to the estimation of damages suffered by the investors—for example, relating to the appropriateness of the discounted cash flow approach to estimate the reduction in fair market value of the investments, and the appropriate operating lifetime for the assets.

A hotly debated issue in assessing the damages is the appropriate sharing of risks between the investors and the government. The investors argued that their investments were made with a reasonable expectation of a stable regulatory regime, given the promises made by the Spanish government. For its part, the Spanish government argued that the claimants were only ever entitled to a 'reasonable return', and that the Special Regime overcompensated investors due to the fall in wholesale market prices.

There are multiple sides to the question of appropriate risk-sharing in RES contracts. One is the extent to which the regulatory risks were factored into the investor's decision-making,[8] and another is whether the rate of return argued by the Spanish government was reasonable given the regulatory risk itself. In one case, the Eiser case, the Tribunal ruled that the claimants should not have expected drastic changes to the regulatory regime, suggesting that such risk would have needed to be fairly compensated.[9]

On the other hand, if the investors could have reasonably expected prices to fall as more solar capacity was added, it could be argued that investors should have incorporated this in their expectation when making the investment decision.

Finally, there is a question as to whether any damages awards can be deemed to constitute illegal state aid. To an extent, this will depend on whether the Special Regime and the 2007 amendment were compatible with the energy and environmental state aid rules at the time, given that Spain had not notified the European Commission of the policies.

Policy and regulatory uncertainty

Renewable energy generation is expected to continue to increase in the coming years. As the share of RES increases relative to conventional energy generation, the challenges of accommodating incremental RES capacity within the wider energy system will increase still further.[10]

In particular, the ambition to transition to economies with 'net zero' emissions is expected to require energy markets and networks to undergo extensive reform to improve their ability to cope with variable supply and demand. Greater cross-border capacity and market integration is also required in order to achieve a sufficiently diversified energy mix while also meeting users' demands as regards system reliability.[11]

Inevitably, this will require significant changes to national and regional policies and regulations that have the potential to substantially affect the commercial viability of RES investments. The question is, does that matter?

In the case of renewable generation technologies, it depends on their cost-competitiveness against existing conventional plants, as well as their competitiveness against other generation technologies that may be introduced in the future.

For example, when solar and wind renewable generation technologies were being developed in the 1990s and early 2000s, they were widely considered to be expensive relative to fossil-fuel generation. Therefore, if there is a policy of expanding renewable generation using public subsidies on the basis that renewables help to mitigate climate change, and if the commitment to the subsidy regime is questionable, then the risk of investment losses will increase.

As the recent renewable energy cases in Spain also demonstrate, changes to policies and regulations can be sudden and difficult to predict. Disputes are more likely to occur where there is greater uncertainty over the future costs of RES, as this makes it more difficult for policies to provide a credible commitment to support them over the long term.

The greater the uncertainty about the evolution of policy, the more difficult it is to anticipate all possible changes in circumstances that could affect the return on investment. As a result, long-term contracts are more likely to be incomplete in hindsight, and the likelihood of disputes arising is expected to increase.

The absence of market mechanisms for the pricing of carbon emissions to address the underlying market failures, and instead relying on myriad policies and regulations that are focused on particular technologies, will also increase the likelihood of disputes. If these rules are revised or renewable energy supports are reduced in response to changing market circumstances, it is more likely that these actions will be seen as discriminatory and breaching widely held standards of fair and equitable treatment. Investors may claim that their legitimate expectations were not met.

In these cases, experts are often asked to value the lost profits as 'damages'. The development of a robust and credible counterfactual against which to value the resulting losses from a change in policy that achieves a national environmental objective can be challenging. In particular, determining what counterfactual policy would have instead been in place to meet the environmental objective will involve consideration of the wider energy system as a whole, not just RES policy.

Similarly, in commercial disputes such as those between generators and the counterparties to long-term contracts, changes to electricity market design can increase the likelihood that the terms of the contract will need to be updated and renegotiated later.

More storms ahead?

Taking stock, the continued growth of RES capacity, and changes to the market structure, policies and regulations across countries, may affect the value of existing investments and contracts governing renewable energy. As a result, we are likely to see more disputes in this sector going forward. Resolution of these disputes will require detailed analysis of the economic, financial and public policy issues.

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[1] REN21 (2018), 'Renewables 2018 Global Status Report', p. 44.

[2] The governments of Austria, the Czech Republic, Germany, Greece, Hungary, Spain and Sweden have set higher targets. See REN21 (2018), 'Renewables 2018 Global Status Report', Table R3.

[3] Bloomberg (2017), 'Offshore Wind Farms Offer Subsidy-Free Power for First Time', 13 April.

[4] International Institute for Sustainable Development (2014), 'A Cautionary Tale: Spain's Solar PV Investment Bubble', February, pp. 6–7.

[5] For example, in 2009, the costs of solar PV reached more than 50% of all spending on renewable energy, despite solar PV producing less than 12% of RES electricity generation. See International Institute for Sustainable Development (2014), 'A Cautionary Tale: Spain's Solar PV Investment Bubble', February, p. 1

[6] Royal Decree 1565/2010; Royal Decree Law 9/2013; Royal Decree 413/2014.

[7] International Institute for Sustainable Development (2014), 'A Cautionary Tale: Spain's Solar PV Investment Bubble', February, p. 2.

[8] In at least once case (the *Eiser* case), the claimants recognised that there could be changes in the regulatory regime and to some extent factored in this risk in their appraisal. See ICSID Case no. ARB/13/36, para. 119.

[9] The Tribunal ruled that 'drastic' changes were implemented in earlier amendments to the Special Regime, but not in the 2007 amendment. See ICSID Case no. ARB/13/36, para. 387.

[10] For an overview of renewable penetration scenarios in Europe, see (for example) IRENA (2018), 'Renewable Energy Prospects for the European Union', February.

[11] Department for Business, Energy & Industrial Strategy and Chris Skidmore MP (2019), 'UK becomes first major economy to pass net zero emissions law', 27 June.