

Renewable energy

SUPPORTING RENEWABLES, WITHOUT THE LAWSUITS



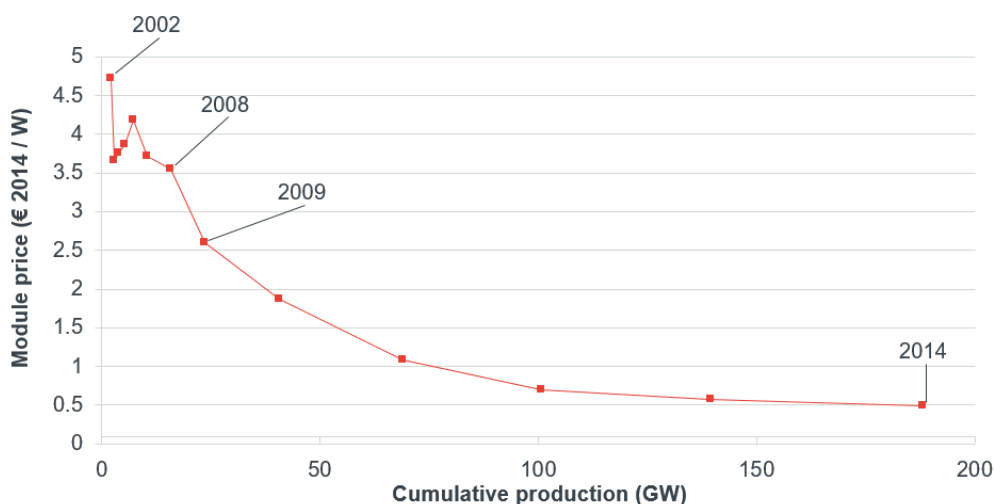
The tumbling cost of renewable energy technology has sparked disputes in the energy sector that are still reverberating. European governments are learning the lessons from this experience and are using auctions more frequently to award support for renewable generation. But several issues remain to be addressed for auctions to be as effective as possible.

The extent of the fall in the cost of renewable electricity generation has been breath-taking and is grounds for optimism. However, it has also created headaches for EU member states and the European Commission alike.

Rapid technological improvements had been expected. Indeed, there would have been little rationale for any support for renewables (beyond pricing carbon) if this had not been the case.

What caused particular problems for member states, notably in the case of solar photovoltaic (PV) modules, was the unexpected speed and magnitude of the cost reductions. Prior to 2009, module costs had been more or less constant for five years. However, in 2009 they suddenly fell by about 30%.

Solar PV module prices, 2002-2014



Source: Frontier, based on Fraunhofer, Photovoltaics Report, 11 March 2016, p.41.

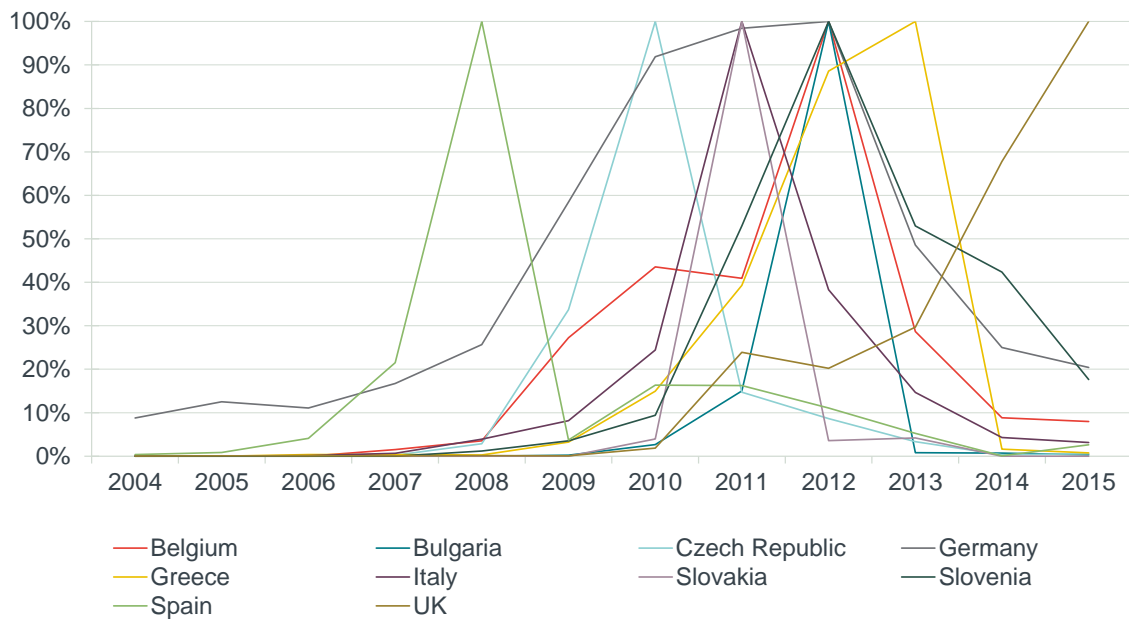
At that time, EU governments' favoured approach to supporting the development of solar PV (including large scale installations) was to offer a feed-in tariff (FiT). The most common form of FiT was a predetermined price paid per MWh of electricity produced over some fixed period, such as 20 years. The level of the FiT was determined according to the commissioning date of the solar installation and would normally be set to cover expected costs, including a reasonable rate of return. At least in the initial stages of many FiT schemes, there were no volume limits or cost control measures, meaning that investors were free to deploy as much capacity as they wished to at the prevailing tariff level.

Getting the sums wrong

Over the longer term, member states planned to adjust FiT levels in line with changes in technology costs. But administratively set FiT rates were not flexible enough to react to rapid changes in PV module costs. The ensuing divergence between costs and revenues for solar PV developers triggered an explosion in solar PV capacity.

The figure below illustrates this process in different EU countries. For example, in the Czech Republic, solar PV capacity additions in 2010 (the peak year for new installations) were three times the level in 2009.

Annual PV capacity installed, as % of PV capacity installed in the peak year for new installations



Source: Frontier Economics, based on IRENA database

Since solar PV was the form of renewable energy that received the greatest support per MWh, the result was much higher-than-expected subsidy payments. This placed a large financial burden on electricity consumers and/or some governments, which were already under pressure to help households and to cut their budget deficits following the financial crisis. However, member states found themselves in a Catch 22: if they were to give notice of future reductions in support, investors would rush to lock in the excessively attractive FiT, compounding the problem.

Governments did eventually scale back support for renewables, including for projects already under way and/or completed. The cuts have triggered a host of disputes between investors and member states. At the time of writing, 36 investor-state arbitration cases have been lodged against Spain, with damage claims amounting to around € 7 billion. Multiple claims have also been filed against the Czech Republic and Italy. These are in addition to disputes before national courts.

What investors regard as legitimate expectations regarding returns or support levels is at the heart of most disputes. The first case against the Czech Republic to be ruled on (*Wirtgen v Czech Republic*¹) went against the claimants.² The tribunal decided that changes made to the legal regime for solar PV “did not violate legitimate expectations of solar investors and represented a reasonable and measured government response to a crisis situation”. Of course, each case is different and decisions by international tribunals do not necessarily set a precedent.

¹ Mr Jürgen Wirtgen, Mr Stefan Wirtgen, and JSW Solar (zwei) v. Czech Republic (ad hoc under Swiss Private International Law Act rules). Wynne Jones, Director in Frontier’s Energy practice, was [appointed by the Czech government](#) to provide expert testimony in this and its other PV cases.

² Global Arbitration Review, 13 October 2017.

Refining the auction process

Thanks in part to state aid rules, many member states are now using auctions to support renewable energy. Thirteen have done so since 2008. Auctions offer greater budgetary control and a competitive price discovery process, helping to ensure that subsidies are not excessive. This should, in turn, reduce the chances of retrospective/retroactive cuts to support leading to the sort of investor-state disputes described above.³

While this is welcome progress, several issues still need to be addressed, across a number of jurisdictions. For example:

- How to ensure that projects winning support in auctions actually supply the energy promised? In the UK, a few developers have chosen not to sign contracts they have been awarded. Some commentators fear that bidders in recent German offshore wind auctions may have treated their agreements as options, rather than as obligations to deliver. Spain has tightened its delivery incentives in response to similar concerns.
- How to ensure a level playing field between technologies? As costs of different forms of renewable energy begin to converge, the focus will inevitably switch to the [wider costs](#) imposed by each technology on the electricity system (and beyond), such as additional expense incurred in balancing the system or in building the transmission network. Regulators should respond principally by using well-designed charging frameworks that make all actors accountable for their impact on the system. But hidden subsidies within support mechanisms and deficiencies in auction design can also mean that the winners are not necessarily those projects that achieve environmental goals at the lowest cost from the perspective of the wider electricity system.
- How to ensure that genuine innovations are appropriately encouraged, alongside support for the deployment of existing technologies? Will competition between rival low-carbon technologies provide sufficient incentive for investors to undertake risky research and development to improve energy outcomes? Or is a different form of support required?

Uncertainty about the future costs of clean energy technologies is impossible to eliminate. It has tripped up governments in the past and will almost certainly do so again in the future. But, at least as far as electricity generation is concerned, adjustments to existing auction designs could help ensure that governments make the most of the opportunities that innovation has to offer.

*Frontier Economics experts regularly provide expert testimony in energy sector litigations and arbitrations; due diligence and transaction valuation advice (including for renewables); and advice on auction design issues. Our experts have also [recently contributed](#) a chapter to Global Arbitration Review's (GAR) second edition of *The Guide to Damages in International Arbitration*. In it, we set out the features of the power and gas sectors that add complexity to damages calculations and describe some of the techniques used to calculate damages in the two sectors.*

³ We note the legal landscape may also be changing. For intra-EU disputes, the Commission's (current) view is that the EU Treaty (and, in particular, State aid rules) should reign supreme (see its decision in State aid case SA.40348 on Spanish renewables support). For disputes between EU Member States and third countries, the Commission has been promoting its vision for 'Multilateral Investment Court'



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