



Back to the (uncertain) future

Despite setbacks in some key markets, the winners of this year's *Environmental Finance* Market Rankings are generally bullish about the growth of existing trading systems and the creation of new ones

Environmental markets rarely run smoothly for very long. This time last year, the winners in our annual Market Rankings were optimistic that much of the uncertainty that had bedevilled the markets in previous years had been dispelled by new regulations and reforms of key markets.

But, as most of these markets are created by regulation, so they can be destroyed by regulation or political change.

This year's major political upheavals – the UK's 'Brexit' vote and the victory of Donald Trump in the US presidential election – have not destroyed any markets, but have certainly cast a shadow over some.

But this year's winners remain generally bullish. "We're excited about the future," says Kevin Townsend at repeat winner Bluesource, a US developer of environmental projects. Among the company's goals for the next decade, is to "create as yet unknown environmental markets, products and services that lower

Implementation of the Paris Agreement is creating plenty of new work for this year's winners

the cost and improve the efficacy of beneficial environmental change."

Not all the winners have such grand ambitions, but most are confident that market solutions to environmental challenges will continue to expand.

The big three winners in this year's poll were the same as in 2015, with Baker & McKenzie the dominant law firm in carbon and renewables markets, Evolution Markets retaining its crown as top carbon broker, and Endurance Global Weather again voted Best Dealer globally.

Other multiple winners this year include US company Karbone and Zurich-based

South Pole Group. Both won in two carbon categories and two renewables categories.

South Pole has taken on new staff during the year to enable it to help more countries implement their emission reduction plans submitted as part of the 2015 Paris Agreement. "We're quite upbeat," said a spokesman.

As is Karbone. Despite an excess of Renewable Energy Certificates (RECs) in some markets in 2016, "the RECs market continues to be an excellent mechanism for getting renewable energy projects online," says CEO Izzet Bensusan.

A supply/demand imbalance also dogs the EU Emissions Trading System and the Brexit decision is another bearish influence on a market already struggling with allowance prices 40% down on a year ago.

But in the US, traders are generally optimistic that the California carbon market – the second biggest – will feel little impact from the election of a climate change sceptic as the country's next president.

The Biggest Winners in the 2015 Annual Market Rankings*

Baker & McKenzie



Evolution Markets



Endurance Global Weather



South Pole Group



Karbone



*Stars indicate number of awards received. Colours of stars relate to categories as laid out on right of page.

Environmental Finance 2016

Annual Market Rankings



GHGs

pages 28-34



Renewable Energy Certificates

pages 36-38



Catastrophe Risk

page 39



Weather Risk

pages 40-41

How the rankings were conducted:

Companies were emailed in October and asked to nominate the leading traders, brokers and service providers in the markets covering carbon emissions, renewable energy certificates, and weather and catastrophe risk, via an online survey. Voters were asked to vote only in those categories in which they had direct experience and to make their judgements on the basis of: efficiency and speed of transaction; reliability; innovation; quality of information and services provided; and influence on the market, not just the volume of transactions handled. More than 600 completed responses were received. Only one vote per company site was allowed and those firms that nominated themselves had their votes disregarded.

Trump's victory makes it unlikely that president Obama's Clean Power Plan will be enacted, but carbon market specialists are confident that several states will press ahead with the policies they developed to comply with the Plan.

"We're expecting no aggressive action on climate change at the federal level," says Rick Saines, of Baker & McKenzie. But "there is still good momentum for carbon markets even with the uncertainty that Trump's election has caused," says Zac Eyler of Ruby Canyon Engineering, another repeat winner.

"California, Quebec, Ontario, British Columbia, etc. show no signs of slowing down their programmes over the coming years," he adds.

Further afield, other countries are pressing ahead with emission reduction plans, in line with their commitments under the Paris Agreement, and in many cases, these involve carbon trading. Chief among them is the national Chinese market that is set to launch next year.

Implementation of the Agreement is creating plenty of new work for many of this year's winners, much of it to do with the roll out of renewable energy capacity.

Plunging costs have helped stimulate rapid growth of wind and solar energy in

recent years but this increase in supply has hit the price of RECs in the US. This was compounded by a relatively warm winter last year which depressed power demand in both Europe and North America.

In response, a growing number of European utilities are looking to use temperature-based weather hedges to protect their revenues. Most winners in the weather risk section of this year's Rankings expect to see increasing use of more complex weather contracts to protect against low wind speeds and lack of sunshine.

They also point to the US agriculture sector as a promising growth area for weather hedging. This industry is also a major force in the expanding market for Renewable Identification Numbers which track the percentage of biofuel mixed into US transport fuel.

Airlines are also seen as a likely source of new business by many of this year's winners, in light of the industry's commitment to launch a new carbon offset market in 2021. And, with increasing interest in the use of markets to improve water supplies, reduce deforestation and even protect biodiversity, optimists think the future looks bright for environmental markets. **EF**

Carbon markets face fresh uncertainty

Political changes in the UK and US have reversed recent progress towards greater clarity in the world's largest carbon markets, says **Graham Cooper**

What a difference a year makes! This time last year, politicians and environmentalists, along with many businesses and investors, were celebrating the signing of the Paris Agreement on climate change and the increased certainty it provided about global and national targets for curbing greenhouse gas emissions.

12 months on, and the same people are bemoaning fresh uncertainties arising from the UK's vote to leave the European Union and the victory of a climate change sceptic in the US presidential election.

The Paris Agreement boosted confidence in the future of carbon markets, with an international PwC survey of large companies – members of the International Emissions Trading Association (IETA) – revealing that 82% expected existing carbon markets would expand as a result of the ground-breaking deal.

EU Allowance (EUA) prices stood at about €8 in December 2015 but, a year later, they are languishing around €5, representing a fall of almost 40%.

Optimism was also prevalent in the North American markets, this time last year, thanks to the election of a more climate-friendly government in Canada and president Obama's progress on his climate change strategy for the US.

A central plank of that strategy – the Clean Power Plan (CPP) – was expected to encourage more states to introduce carbon trading and possibly join one of the existing regional carbon markets – in California and the northeast (the Regional Greenhouse Gas Initiative (RGGI)).

"It really feels like we are in growth mode again around greenhouse gas credits in North America," said one of last year's winners in December 2015.

Category	Winner	Runner-up
EU Emissions Trading System		
Best Broker, Spot & Futures	★ Evolution Markets	
Best Trading Company, Spot & Futures	★ ETS Markets	Redshaw Advisors
Best Broker, Options	★ Evolution Markets	
Best Trading Company, Options	★ ETS Markets	CF Partners
Best Advisory/Consultancy	★ Redshaw Advisors	ETS Markets
Best Law Firm	★ Baker & McKenzie	
Best Verification Company	★ DNV GL	Lucideon CICS
Best Exchange/Clearing House	★ ICE Futures Europe	EEX

A year later, however, both the CPP and the California market are beset by legal challenges, while the Brexit decision, low EUA prices, and a lack of clarity over forthcoming market reforms, have cast a cloud of uncertainty over the EU market.

"It's been a very interesting 12 months," says a rueful Louis Redshaw, founding director of Redshaw Advisors, that retained the title of Best Advisory/Consultancy (EU ETS) in this year's poll.

Despite some "pretty serious" nuclear plant outages in France and the approach of winter, the fact that EUA prices remain far below last year's highs "tells us there is oversupply in the market – even in a year with backloading," he says, referring to the mechanism to withhold 900 million EUAs from auctions in 2014-2016 until 2019-2020 in an attempt to temporarily reduce the excess that accumulated after the economic slowdown after 2008.

"All the signs are for lower [EUA] prices next year."

Louis Redshaw,
Redshaw Advisors



Category	Winner	Runner-up
North American Markets (California)		
Best Broker, Spot & Futures	★ Evolution Markets	Karbone
Best Trading Company, Spot & Futures	★ Vitol	BP
Best Broker, Options	★ Evolution Markets	Karbone
Best Trading Company, Options	★ Vitol	Element Markets
Best Offset Originator	★ Bluesource	Element Markets
Best Advisory/Consultancy	★ Karbone	Element Markets
Best Law Firm	★ Baker & McKenzie	Stoel Rives
North American Markets (RGGI)		
Best Broker	★ Evolution Markets	Karbone
Best Trading Company	★ Vitol	Element Markets
North American Markets (All)		
Best Advisory/Consultancy	★ Karbone	Element Markets
Best Law Firm	★ Baker & McKenzie	Latham & Watkins
Best Verification Company	★ Ruby Canyon Engineering	ESI Carbon
Best Project Developer	★ Bluesource	EOS Climate

“The news from the power sector is almost as bad as it can be but carbon is still struggling to break higher,” he says.

ETS Markets – voted Best Trading Company (EU ETS) – shares Redshaw’s concern. “It’s a frustrating time,” says Tim Atkinson, the firm’s founder. “We would like to be working more proactively with clients about developing future compliance strategy but Brexit concerns, unclear Phase 4 reforms and low prices make that difficult.”

Many companies see too much uncertainty to take a long-term view at present, he says. Although allowance purchasing requirements are going up, as targets tighten and surpluses are used up, at current prices EUAs are not a significant cost for many companies, he adds.

Few market insiders expect any dramatic recovery in prices next year. Redshaw says he expects 2017 will see the French nuclear plants resume generation, and lower gas prices as more LNG capacity becomes available, but no major increase in demand for allowances. Furthermore, the end of backloading will mean an increase in EUA supply.

“Some pretty serious headwinds are coming,” he says. “All the signs are for lower prices next year.”



“Many companies see too much uncertainty to take a long-term view at present.”

Tim Atkinson, ETS Markets

Further bad news for the embattled EU market, is the threatened mandatory closure of coal-fired power stations in several European states. “Such intervention is

undermining the carbon market,” Redshaw says.

2017 will be an important year for companies to keep track of EU ETS Brexit negotiations and Phase 4 reforms, notes Atkinson at ETS Markets. They should remember “that policy decisions can cause sudden price movements so being able to react quickly will be important,” he says.

In response to the low prices, both Atkinson and Redshaw have been looking beyond their core activities based around the EU ETS.

ETS Markets has started to do more advisory work on renewable energy and energy efficiency, while Redshaw has advised South Korean companies about emissions trading and provided firms in the aviation sector with training on emissions trading. Most airlines will be covered by a new carbon market – the Carbon Offsetting and Reduction Scheme for International Aviation (Corsia) – from 2021.

Baker & McKenzie, which held on to its title of Best Law Firm in the EU ETS, for the eighth year in succession, is also seeing more interest from airlines. “We see an increasing of level of activity here,” says Martijn Wilder, head of the firm’s global environmental markets and climate change practice.

The company’s work on the EU ETS has been “pretty limited” in the past year, he adds. The focus has been more on advising its European clients who operate internationally in other markets, while also working on the REDD+ forestry crediting mechanism and policy work, Wilder says.

But, despite the low prices, EUA trading volumes remain robust, with average daily volume on the Intercontinental Exchange (ICE) in London of about 20,000 lots, says Gordon Bennett, managing director, utility markets at the exchange. ICE was once again voted Best Exchange/Clearing House for the EU ETS.

And, with more than 100 companies trading on a typical day, the EUA futures contract is one of ICE’s leading utility-focused contracts, he adds.

Volumes have also been strong in the bilateral over-the-counter (OTC) market. “We have seen an uptick in OTC volumes and expect that to continue into 2017,” says Michael Karavias, a London-based

managing director at Evolution Markets, which was once again voted Best Broker in the EU ETS.

The world's second largest carbon market – that of California – is also beset by uncertainty and low prices. But the reasons are specific to the state and unrelated to the election of a president who has dismissed climate change as a Chinese hoax.

The California market didn't move at all in reaction to Trump's election, says Lenny Hochschild, MD and head of the Carbon Americas group at Evolution Markets, which also retained its stranglehold on the title of Best Broker in both the California and RGGI market categories. "I don't see the federal election affecting California's policy," he adds.

Even if the incoming US administration cancels the Clean Power Plan, the Californian market is unlikely to be affected, agrees Kevin Townsend, chief commercial officer at Bluesource, which retained its title as Best Project Developer in the North American markets as well as Best Offset Originator in the California market. The California administration is "going to do what they need to do to achieve their goal," he says.

But 'spillover effects' from other policies of the incoming administration could affect the market, cautions Izzet Bensusan, CEO of Karbone, which won the Best Advisory/Consultancy title for California and all North American GHG markets. "If Trump finds ways to support the fossil fuel sector, actually implements his infrastructure improvement plan, or 'brings back manufacturing' in some meaningful way, each of these could theoretically increase emissions in California (and the rest of the country), thereby increasing allowance prices."

The state continues to set the pace in terms of emission reduction targets in the US and in August the state Assembly and Senate passed bills that set an aggressive new target for 2030 – to reduce California's GHG emissions to 40% below their 1990 level.

But the market, launched in 2012, is under attack from the local Chamber of Commerce and others who argue that auctions of emission allowances are effectively an illegal tax, while the state's

'Environmental Justice' lobby group remains opposed to the very principle of cap and trade.

Rick Saines, head of Baker & McKenzie's North America climate change and environmental markets practice, notes that the 2030 target is now codified in law, so "the big question is how best to meet it".

He thinks it is likely that industry will rally to support the cap-and-trade market if the alternative is 'command and control'. "All the infrastructure is there for a very solid market," he notes.

Baker & McKenzie has been voted Best Law Firm in the North American carbon markets for six years now, mirroring its leading role in the EU market.

The story of the year in the US has been significant progress at state level, adds Saines. In addition to California's plans for 2030, Oregon and Washington are both considering trading markets while several other states have undertaken preparatory work in anticipation of the Clean Power Plan being enacted.

"Even before Trump's election, much of the activity was at the sub-national level across North America," agrees Zac Eyler, vice-president, greenhouse gas programmes, at Ruby Canyon Engineering, which was again voted Best Verification Company in the North American GHG markets.

And, notes Hochschild, Ontario is expected to link to the California market in 2018, following in the footsteps of Quebec. The RGGI market has also discussed the possibility of aligning its rules with those of California, market insiders say.

The likely demise of the CPP under the Trump administration would be more of a blow to the RGGI market than to California,

they warn. This was reflected in allowance prices immediately after the election result was announced. Carbon prices in RGGI dropped 10.4% to about \$4.2 within 24 hours of Trump's victory being announced. California prices, on the other hand, were virtually unchanged at about \$12.8.

The final CPP rules – which aim to curb emissions from US power plants – "are supportive of regional and potentially national trading," notes Saines. Several states were believed to be considering joining RGGI to help them comply with the Plan.

But the CPP was already facing a legal challenge, before Trump's election victory. The US Supreme Court put the brakes on the plan in February, pending a judicial review. The US Court of Appeals for the DC Circuit heard the challenge against the CPP in late September, but it is unlikely to reach a verdict until next year.

Several states intervened in favour of the CPP, although 25 others opposed it, Saines notes. "Some of the plans developed in preparation for CPP may proceed even in the absence of the CPP"

"I think you're going to see some states

**"We expect more
certainty on legal and
policy challenges in
2017"**

Kevin Townsend, Bluesource



Category	Winner	Runner-up
Kyoto Project Credits (JI & CDM)		
Best Trading Company, Secondary Market	★ South Pole Group	Statkraft
Best Advisory/Consultancy	★ Kanaka Management Services	South Pole Group
Best Law Firm	★ Baker & McKenzie	
Best Verification Company	★ EPIC Sustainability Services	TUV Nord
Best Project Developer	★ South Pole Group	
Best Exchange	★ ICE Futures Europe	

taking aggressive action on climate change; while others will breathe a sigh of relief,” if the CPP is cancelled, he says.

2016 has been “a pretty difficult year” for RGGI, says Hochschild at Evolution Markets. In addition to the unexpected decision by the US Supreme Court to ‘stay’ the CPP, also unexpected was the decision in August by NY governor Andrew Cuomo to provide billions of dollars to help four nuclear plants to remain operating. This exerted some further downward pressure on carbon allowances in the market.

But most major players are optimistic for 2017.

“I think 2017 should be much better,” says Townsend at Bluesource. “We expect more certainty on legal and policy challenges in 2017.”

“We are still confident in the momentum and direction for 2017 and after,” agrees Eyer at Ruby Canyon, “overall there is still good momentum for carbon markets even with the uncertainty that Trump’s election has caused.”

Hochschild at Evolution Markets says he expects the challenge to the California market to be resolved in the first half of the year.

There is also renewed optimism in the international market for ‘Kyoto credits’ thanks to the Paris Agreement. The 1997 Kyoto Protocol – the precursor to the Paris Agreement – created instruments such as the Clean Development Mechanism (CDM) which award tradable carbon credits to projects in developing countries that prevent, or avoid, GHG emissions.

Although prices for CDM credits have collapsed to levels that are insufficient to make many potential projects economically

viable, there are widespread hopes that a mechanism similar to the CDM will form the basis of international offset trading under the Paris Agreement.

“We are in early discussions with several parties on transitioning projects from the

“I think you’re going to see some states taking aggressive action on climate change; while others will breathe a sigh of relief [if the CPP is cancelled]”

Rick Saines, Baker & McKenzie



existing infrastructure under the CDM to the future mechanism, and/or bilateral transactions under Article 6 of the Paris Agreement,” says Caspar Chiquet, a key account manager for the public sector at South Pole Group, voted Best Project Developer and Best Trading Company in the Kyoto credit market. “It looks like existing CDM projects, especially [those] in least developed countries, will play an important role.”

In addition, he adds: “Our public advisory team works on assisting governments and multilaterals in the transition from the Kyoto Protocol to the Paris Agreement.”

The Zurich-based company is also engaged in the World Bank’s effort to support the CDM via its innovative Pilot Auction Facility and was among nine winners in the second auction, for methane reduction projects, held in May 2016.

K.Sudheendra, head of operations at

India’s EPIC Sustainability, which retained the title of Best Verification Company in the Kyoto credit market, says methane projects are among the most popular in the market at present. Despite the low prices for most CDM credits, he reports reasonable supply and demand and is confident that there will “definitely be more activity” in 2017.

Another source of work for South Pole is the proposed new market in offset credits for the aviation sector. The company “is in talks with several airlines regarding early action and pre-compliance engagements,” says Chiquet. “Many of those airlines are existing buyers of voluntary offsets from our portfolio of projects,” he adds.

Baker & McKenzie also sees potential in the aviation sector. “We see an increasing level of business here,” says Martijn Wilder. Another possible growth area is the

Chinese national carbon market which is due to begin in 2017. “We are getting more and more queries,” but the market is still developing and remains quite opaque, he adds.

And the Paris Agreement “has had a big impact,” Wilder stresses. Among other projects, Baker & McKenzie is advising various governments on their national emission reduction plans submitted as part of the Agreement; working on the REDD+ mechanism to reward projects that prevent deforestation; and developing ideas around Article 6 of the Agreement, which provides a foundation for international cooperation through markets.

And, he adds, “many corporate clients are developing plans to develop carbon offsetting plans and climate strategies.

“For us it is like post-Kyoto all over again and the opportunities are significant,” he concludes. **EF**

RECs in reverse

This year has seen a reversal of fortunes for some renewable energy certificate (REC) markets, with some of last year's best performing US markets seeing big price drops, while EU and Australian markets saw record gains. Hamza Ali reports

Renewable energy certificate (REC) markets have had a tough year in the US, as the supply of certificates outstripped demand.

"Power consumption has been lower this year, and that's just a factor of the weather being warmer and an increase in the uptake of energy efficiency upgrades, so you've had less electricity usage overall and this lowered demand for RECs," says Izzet Bensusan, CEO of Karbone, which was voted Best Advisory and Best Broker for the North American RECs markets in this year's poll.

In the US, 29 states and the District of Columbia have put in place mandatory requirements for electricity suppliers to source part of their electricity load from renewable sources.

Each REC is essentially proof that a megawatt of renewable energy has been delivered to the grid and sufficient certificates have to be presented by electricity suppliers to regulators at regular intervals to meet the mandatory targets, known as Renewable Portfolio Standards (RPSs).

While RECs are tradable separately from the renewable electricity they represent, lower power usage means demand for RECs falls as electricity suppliers need fewer certificates to comply with the RPS, says Bensusan.

Even as demand fell this year, build rates of renewable energy plants did not taper off, which meant compliance markets such as the Pennsylvania, New Jersey, Maryland Power Pool (PJM) – the largest RECs market in the US – saw an oversupply which caused prices to fall.

"Certain compliance markets, such as PJM, have remained extremely volatile, currently trading below \$10 per MWh from a high around \$20 per MWh," says Scott Eidson, vice president, environmental markets at 3Degrees, which won the title of Best Trading Company for North American RECs for the second time.

Markets like PJM include RECs generated

by different renewable energy technologies and different states.

Within these larger markets, some states set additional RPSs to give additional support to certain technologies. For example, Pennsylvania and others have Solar RECs (SRECs), which set targets purely for solar technologies.

Prices for SRECs dropped sharply in

Category	Winner	Runner-up
RECs North America		
Best Broker	★ Karbone	Evolution Markets
Best Trading Company	★ 3Degrees	DTE Energy
Best Advisory	★ Karbone	Evolution Markets
Best Law Firm	★ = Chadbourne & Parke = Baker & McKenzie	
RECs Europe		
Best Broker	★ Enegia Group	Cleanworld
Best Trading Company	★ South Pole Group	
Best Advisory	★ South Pole Group	
Best Law Firm	★ Baker & McKenzie	
RECs Australia		
Best Broker	★ TFS Green	
Best Law Firm	★ Baker & McKenzie	
Renewable Identification Numbers		
Best Broker	★ Element Markets	
Best Trading Company	★ Bluesource	
Best Advisory	★ Element Markets	
Best Law Firm	★ Baker & McKenzie	

many states in 2016, as the falling cost of the technology led to more projects being built, resulting in an oversupply of certificates.

The Maryland SREC market, for example, has seen prices fall from \$170 per MWh in December 2015 to an all-time low of \$18 in November. Solar farm build rates in the state reached 30MWh/month during the first quarter of 2016, which far outstripped demand of 6MWh/month.

Although this slowed towards the end of the year, the market is forecast to have an oversupply of 291,000 SRECs or 80% of the RPS in 2016, according to SRETrade, a management firm specialising in solar RECs.

Similarly, prices have fallen in the New Jersey SREC market from a peak of \$260 in 2015 to \$206 in 2016.

“In New Jersey we saw build rates continue to rise as prices began to go down, as projects were fully hedged for the fall in SREC prices,” says Rich Weihe, managing director of Karbone. “It’s kind of what we saw in Maryland where build rates had not been declining as fast as prices.”

The reason developers can continue to build, despite the low price of power and RECs, is that costs have also fallen dramatically, agrees Todd Alexander, a partner at Chadbourne & Parke, which shared the title of Best Law Firm for North American RECs with Baker & McKenzie.

“Contractors are achieving greater economies of scale and operators are lowering costs through the use of new technologies and the benefits of having more projects in closer proximity. We now see solar projects willing to offer energy prices near 3 cents per kWh,” he says.

Another factor affecting RECs prices is the federal government’s extension of the Investment Tax Credit (ITC) and Production Tax Credit (PTC), notes Alexander.

The ITC is a tax break for renewable energy which allows some investors to recoup up to 30% of the value of the project and was due to expire at the end of 2015.

The PTC provides renewable energy generators with tax relief of 2.3 cents per kWh.

ITC and PTC were extended in a surprise bipartisan move by Congress in December 2015, for another five years. However, many projects that had been rushed through before the credits were due to expire, came online in 2016. These added to the oversupply of RECs, explains Alexander.

However, while RECs prices have fallen in some markets, various factors, including the election victory of Donald Trump, could cause power prices to rise in the coming year, according to Bensusan.

“The immediate effect of the US election was that the yield on 10-year Treasuries went up, and this is impeding some people from making deals that they could have made a month earlier, due to their cost of capital going up,” he says. “REC prices may go up next year, if it becomes apparent that there isn’t more supply coming online.”

As most RECs markets are state regulated, Bensusan expects the market to continue to grow as “states that have a RECs markets will pursue the course even deeper.”

Chadbourne & Parke’s Alexander agrees saying: “I do not expect that we will see a repeal of either the investment tax credit or the production tax credit, which are the two principal federal incentives available to renewable energy projects. Rather, I expect that Congress will allow the current phase outs of these tax credits, which are already underway, to continue to take effect.”

Across the Atlantic, the price of Guarantees of Origin (GOs), the EU version of RECs, more than doubled early in 2016.

For example, prices for Norwegian hydro GOs climbed to €0.40 (\$0.43) per MWh February from €0.15, before seeing prices drop back down to €0.20. This unusual level of volatility was attributed to a surprise announcement by the UK regulator, Ofgem,

that foreign GOs could be used to comply with its national system.

However, the UK, which operates a separate renewable certificate market called Renewable Energy Guarantees of Origin (REGO), dampened market exuberance when it later clarified that the scheme would not affect 2016 supply, causing prices to fall back slightly.

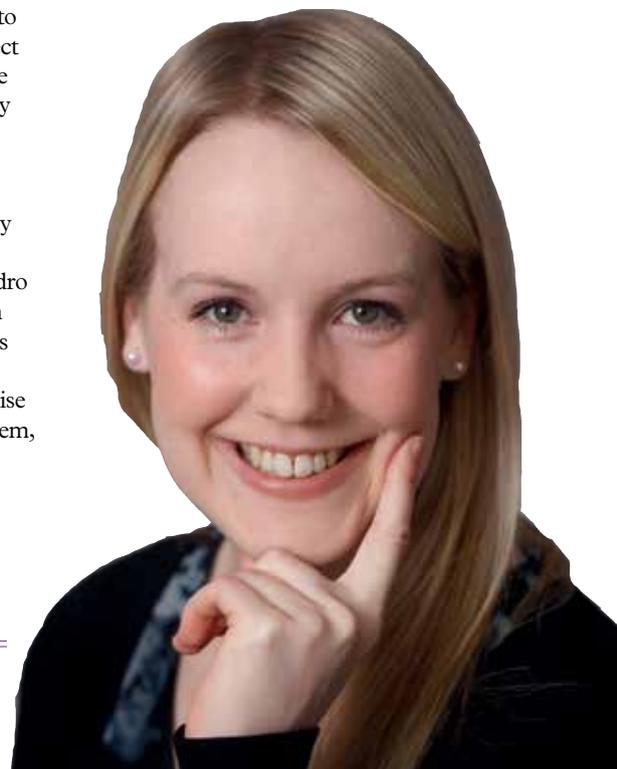
“It’s not often that you see such dramatic price jumps in this market,” says Suvi Viljaranta, portfolio manager at Enegia, which was voted Best Broker for European RECs for the second year in a row. “All of a sudden, in February, Ofgem makes an announcement that some GOs could be used to get exemptions from the feed-in-tariff and the price of GOs jumps to €0.40.”

GOs have also been boosted by a rise in European demand for renewable energy of just over 9% since 2014. Initiatives such as RE100 – through which companies have pledged to source 100% of their electricity from renewable sources – have added to the traditional household demand for green energy in Europe, says Marie Christine Bluett, head of renewables portfolio management at South Pole Group, which was voted Best Advisory for European RECs.

“We now have large end-consumers prescribing themselves to renewable energy

“It’s not often that you see such dramatic price jumps in this market”

Suvi Viljaranta, Enegia





“We have seen a tremendous drop in the cost of these projects”
Izzet Bensusan, Karbone

consumption goals on a never before seen scale,” she says.

Five countries account for three quarters of the RECs demand in Europe – Germany, Sweden, Switzerland, the Netherlands and Italy. But Germany, which has for the past few years been the biggest importer of GOs, has seen demand fall for the first time in five years. The country purchased 65 TWh during the first half of 2016, a drop of 5% year-on-year, but remained the biggest market.

Norway, Austria, Finland, Denmark, France and Belgium currently make up the next group of countries – each with a steady market demand of between 10 and 35 TWh annually, according to Viljaranta.

Meanwhile, in Australia, the RECs market reached record highs, after the government’s new targets for renewable energy, announced in June 2015, gave a boost to trading.

The new targets are 33,000 GWh by 2020 for large scale renewable energy such as wind farms (the Large Scale Renewable Energy Scheme) and a Small Scale Renewable Energy Scheme for technologies, such as solar PV on residential properties, which has an aspiration, but not a target, of 4,000 GWh by 2020.

While these new targets have helped

revitalise investment in renewables, a forecasted shortfall in supply caused the price of large-scale generation certificates (LGCs) – formerly known as RECs – to rise steadily over the past year, from AUD65 (\$48) to AUD90 in November.

“For a period we had a lot of uncertainty

around the government’s renewables targets which has now been settled,” says Martijn Wilder – head of the global environmental markets practice at Baker & McKenzie. “We have seen the reengagement of investment in renewables and increased demand for these products.” EF

RINs on the rise

Policy certainty has helped push 2016 prices for Renewable Identification Numbers (RINs) up from their lows of last year, according to Element Markets.

RINs are tradable certificates that track the compliance of fuel refineries with the US government’s Renewable Fuel Standard (RFS) – a law which requires that refineries blend a certain proportion of renewable fuels into transportation fuels each year up to 2022.

The four fuel categories under the RFS are:

- Cellulosic biofuel (D3 & D7)
- Biomass-based diesel (D4)
- Advanced biofuel (D5)
- Total renewable fuel (D6)

The market has had a tumultuous recent history, thanks in part to short-term uncertainty about the targets, says Randy Lack, chief marketing officer at Element Markets which was voted Best Advisory and Best Broker in this category.

Over the past few years the Environmental Protection Agency (EPA) has been slow to announce the renewable volume obligation (RVO), which sets the percentage of renewable fuel that must be used in the fuel mix, he explains.

2016 saw policy certainty thanks in part to a “mammoth effort” by the EPA to set the renewable volume obligation on time, he adds.

“It was a transitive year within the renewable fuels sector ... this year was really about EPA getting back on track,” says Lack. “The market worked fluidly and we’ve seen an uptick in pricing.”

The most dramatic price rise was for Cellulosic D3 RINs, when the EPA ramped up the RVO from 123 million gallons in 2015 to 230 million in 2016. This caused prices of the Cellulosic D3 RINs to climb from \$0.60 to \$2.40.

Another factor driving prices higher is tighter supply of RINs for some fuels, which could halve by the end of 2017, according to Goldman Sachs.

“We see risk of persistently high(er) and more volatile RIN prices as the market gains a greater appreciation of potential tightening of RIN stocks,” the bank said, referring to the D6 compliance credits.

It has predicted that inventories of the credits will fall by a quarter this year to 1.39 billion gallons (5.26 billion litres) and by another 43% to just 786 million gallons by the end of 2017.

The rising prices have caused some tensions in the market, with Jack Lipinski, CEO of independent refinery CVR Energy, saying: “RINs have become a black pool allowing exempt parties, and even speculators, to drive prices to confiscatory levels. RINs were intended to be a compliance tool for refiners, not a device to extract windfall profits from obligated parties.”

Activist investor Carl Icahn, who owns a majority stake in CVR Energy, has also been an outspoken critic of the RINs market, calling it “rigged” in an open letter to the EPA earlier this year.

“The RINs market will cause a number of refinery bankruptcies,” Icahn wrote. “The domino effect of this will be that ‘big’ oil will sop up the bankrupt refineries, causing an oligopoly resulting in skyrocketing gasoline prices.”

However, the EPA has stayed its course and this year’s RVO, for the first time, hits the levels targeted by Congress nearly a decade ago when the law was penned.

The victory of Donald Trump in the presidential election threatens to add extra complexity to the market, as he has vowed to dismantle the EPA.

Icahn, who has been a vocal Trump supporter, has remained silent on the issue since the election but the billionaire investor has reduced his stake in CVR Energy in recent weeks.

However, on the other side of the equation, Trump has voiced support for the biofuel industry, which has campaigned for a higher RFS.

Ahead of his victory, he campaigned on a pro-ethanol platform when he visited America’s farm states and biofuels advocates expect he will keep the RFS strong. Those states are believed to have won Trump the White House.

The battle between “big oil and big corn” will likely see Trump disappoint some of his supporters, and affect prices in 2017.

Innovation increases in static market

While Hurricane Matthew attracted most attention, 2016 also saw some significant innovation in the cat bond market, says Joe Walsh

Hurricanes in Florida remain the biggest risk focus for the catastrophe ('cat') bond market. So the lead up to Hurricane Matthew, which struck the region in October 2016, was a nervous time for investors. However, although the wider insurance and reinsurance industry incurred significant losses, no cat bonds are expected to be triggered, says Harry White, risk consultant at AIR Worldwide.

AIR retained the title of Best Advisory for Catastrophe Risk for the third year running in this year's Rankings.

Although Matthew was not as damaging as some feared, with one trader saying it could have been a \$50 billion event, it could still have a significant impact on demand for cat bonds.

"I think that was the first time that companies started post-2005 had a real chance of having some large potential losses, so we'll see if this event impacts their demand for coverage," says Laura Taylor, managing partner and chief financial officer at Nephila Capital, voted Best Trading Company for the seventh year in a row.

Bill Dubinsky, managing director and head of insurance linked securities (ILS) at Willis Towers Watson (WTW), which won the Best Broker title, says Hurricane Matthew was pretty much a non-event from a cat bond perspective. He describes it as mostly a storm surge and flooding event in the Carolinas.

Elsewhere in the world, major events such as UK floods and earthquakes in New Zealand and Italy caused significant losses but were not big enough to dent the market's domination by US hurricane risk, according to Taylor.

Overall, the value of new cat bond issues showed little change in 2016 from the previous year. Bonds worth just over \$6

billion had been issued by 1 December, including both public and private issues, compared to a total of \$7.9 billion for 2015, according to market research firm Artemis. Public issues alone amounted to \$4 billion by 30 September, compared to \$6.2 billion for the whole of 2015, according to WTW.

But 2016 saw more innovation and new products on offer, according to Martin Malinow, president of Endurance Global Weather, voted Best Structurer/Arranger for the second year running.

One notable development was Allianz Risk Transfer entering the market with a \$70 million cat bond covering against extreme European weather – the first such issue since 1999. It was singled out by both Claude Brown, partner at Reed Smith and AIR's White for its innovation in the market, as it was based on weather events, rather than a strict 'catastrophe'.

Reed Smith retained its Best Law Firm title for the third consecutive year.

We are starting to see reinsurance capacity shrink, says Taylor, as a result of 2016 events such as the UK floods and earthquakes in Italy and New Zealand. The merger of Willis and Towers Watson, completed at the beginning of 2016, also impacted capacity, although supply still outweighs demand for some risks.

Brown, however, argues that attractive coupons have driven demand for cat bonds, leading it to outstrip supply in some respects. AIR's White agrees that investor



Laura Taylor, Nephila Capital: market is still dominated by US hurricane risk

appetite is strong, as 2016 saw several deals upsized and prices at the lower end of guidance.

Non-natural risks, most notably cyber risk, is where market players believe the industry will see developments over the next couple of years. In April, AIR released its first global cyber exposure data standard and expanded its cyber risk consulting practice to enable clients to better understand the risk.

WTW's Dubinsky describes it as an appropriate place for the market to expand into, but believes it won't be able to do so itself and will need to partner with insurance or reinsurance companies already active in the market. **EF**

Catastrophe Risk Management – Global

Best Dealer (Structurer/Arranger)	Winner ★ Endurance Global Weather	Runner-up Swiss Re
Best Broker	Winner ★ Willis Towers Watson	
Best Trading Company/Investor	Winner ★ Nephila Capital	
Best Advisory	Winner ★ AIR Worldwide	
Best Law Firm	Winner ★ Reed Smith	

European energy companies enter market

Leading weather risk specialists see hedging demand growing from energy companies in Europe and the agriculture sector in the US. Joe Walsh reports

A warmer than usual winter encouraged European energy companies to hedge their weather risk in a major way over 2016, market specialists say.

“It was a very warm winter in Europe last year so the majority of clients who purchased weather protection last year got paid almost up to the limit of what they bought,” says Martin Malinow, president of Endurance Global Weather. The potential for more of the same this winter has led to repeat business as “clients who bought last year have largely bought this

year,” he adds.

Endurance again made a clean sweep of the Best Dealer/Structured Product Seller category, winning in all four regions covered by the rankings: North America, Europe, Asia and Australia.

It’s a view shared by Claude Brown, partner at Reed Smith, voted Best Law Firm globally for the fourth year running. He describes it as the ‘hallmark’ of the year but explains that it wasn’t solely the result of one warm winter, as European energy companies had been considering weather risk management for several years.

“We’re seeing new large European energy players come and start purchasing protection who have never been in the market before,” says Malinow. Their entrance into the market, as they move from pilot deals to protecting a large proportion of their business, could increase the energy protection market by 50% - 100% over the next couple of years, he predicts.

Claire Wilkinson, managing director of structured risk solutions at Willis Towers Watson (WTW), which shared the title of Best Broker (Europe) with Meteo Protect, agrees.

“2015/16 was a very warm winter in Europe, so many of the capacity providers paid out large claims. This may have an impact on both supply and demand and ultimately on the price for warm winter protection,” she says.

But the warm winter was not the sole reason for European energy companies increasing their weather hedging significantly. As these companies add more renewables to their generation capacity, their businesses become more exposed to the weather.

“European energy companies entering the market has been driven by warm winters there as well as the build out of solar and wind installations, so now you have a larger share of the energy stack coming from intermittent weather driven sources,” says Malinow.

Despite this, the growing influence of renewables on the weather market has not yet happened to the extent expected, as the industry still faces some hurdles, according

Weather Risk North America				
Best Broker	Winner	★ Choice Energy	Runner-up	Evolution Markets
Best Dealer/Structured Product Seller	Winner	★ Endurance Global Weather	Runner-up	Nephila Capital
Weather Risk Europe				
Best Broker	Winner	★ = Meteo Protect = Willis Towers Watson		
Best Dealer/Structured Product Seller	Winner	★ Endurance Global Weather	Runner-up	Nephila Capital
Weather Risk Asia				
Best Broker	Winner	★ Aon Benfield	Runner-up	CQ Partners
Best Dealer/Structured Product Seller	Winner	★ Endurance Global Weather	Runner-up	Swiss Re
Weather Risk Australia				
Best Broker	Winner	★ CQ Partners		
Best Dealer/Structured Product Seller	Winner	★ Endurance Global Weather	Runner-up	Nephila Capital
Weather Risk Global				
Best Advisory/Data Service	Winner	★ Speedwell		
Best Law Firm	Winner	★ Reed Smith		

to Nicholas Ernst, director of weather markets at Choice Energy.

Houston-based Choice took the title of Best Broker for Weather Risk Management in North America for the first time.

“Take off of renewables has not yet happened... I think everyone expects that it will, but it’s not happened as quickly as people hoped,” agrees Wilkinson.

Claude Brown at Reed Smith also feels renewables have not had as much impact on the market as had been expected.

“There is a growing interest in the wind market, and to a lesser extent solar. In Europe, wind is leading solar, so there is a trickle through effect, but it’s just lagging,” he said.

However, industry players remain confident that there will be an uptick in hedging interest from renewables facilities further down the line as the industry continues to grow.

“We’re working with a number of companies in the renewables sector and have expectations that there will be more activity in coming years,” says Wilkinson.

But not everyone is convinced renewables have been slow to join the market. David Whitehead, co-chief executive officer at Speedwell, which retained the title of Best Advisory/Data Service (Global), says the sector is showing interest in its weather data.

“We are not seeing a lack of renewables business. As we understand it, there’s a lot of hedging being done. We’ve seen the demand and we’ve gone

ahead and created a ‘gridded’ wind data set and that’s obviously for wind farms,” he says.

Gridded data is based on a combination of satellite readings, ‘reanalysis data’ from processed historical data and some actual production data from operating assets.

One reason why brokers aren’t seeing as much activity from renewables as some expected could be the difficulty in pricing the industry’s weather risk. It has more variables to consider that are harder to predict over the long term, such as wind strength and the amount of time it’s blowing, or temperature combined with cloud cover.

“When looking at pricing these renewables deals, they’re not quite as easy as temperature, but I have a feeling that within the next year or two people will come up with different ways of overcoming those difficulties,” says Ernst.

One company trying to come up with innovative solutions to overcome market difficulties is Meteo Protect, which shared the title of Best Broker (Europe) with WTW. The Paris-based broker, founded in 2011, claims to have the largest team in Europe focussed solely on weather risk management.

“Clients are more and more demanding; they want more refined structures, as bespoke as possible and the complexity of what we do is increasing. It is only limited by our own speed to come up with new innovations,” says CEO Gabriel Gross.

One area of innovation attracting particular focus in 2016 was the increasing use of data and expansion into new geographies, with WTW noting that the use of satellite data has enabled new trades

to come to market. This is particularly true in Africa, where the transactions it structures are reliant on satellite data.

“Satellites are allowing customers to create solutions for parts of the world where there’s perhaps a lack of data,” says WTW’s Wilkinson.

Meanwhile Speedwell has launched a weatherxchange platform, with help from Reed Smith, which uses gridded data and allows clients to access data, provides deal structuring tools and pricing.

“A big trend would be the use of gridded data sets, that’s definitely the catchword of the year. We’ve even launched a whole new product line for it,” confirms Whitehead.

This greater push for innovation and bespoke products is not seen as universally beneficial and will hinder the ability to trade hedges on the open market, according to Ernst at Choice Energy.

“In doing that, I think we lose some of the standardisation of getting rid of risk,” he says, although he does agree it is a great thing for clients, as it is that side of the business that is driving innovation.

Another trend in 2016 was a greater push for diversification of end-users in the weather market, with industry experts reporting that transportation, construction, and particularly agriculture in the US, have potential for growth. “With 88% of businesses’ profitability impacted by the weather, firms are beginning to recognise how bespoke insurance cover can protect their bottom lines,” says Kurt Cripps, managing director at Aon Benfield, voted Best Broker (Asia) for the first time.

Energy remains the largest sector for weather hedging in North America, but 2016 saw a continuation of the previous year’s trend of growing interest from American agriculture companies. WTW says it’s where it is most active and Endurance forecasts tremendous growth, potentially becoming its primary focus in the coming years.

“We’ve tried to concentrate on the agricultural side of the market. I see that sector growing even more,” adds Choice’s Ernst. Relative newcomers Meteo Protect says two thirds of its business already comes from the agriculture sector. EF

“Take off of renewables has not yet happened... I think everyone expects that it will, but it’s not happened as quickly as people hoped”

**Claire Wilkinson,
Willis Towers Watson**

