

The rise of
corporate
PPAs

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Corporate power purchase agreements have emerged as the most attractive structures for delivering large volumes of renewable energy to major power users.

Clean power PPAs totalling 19.5GW were signed by over 100 corporations in 23 different countries in 2019, according to data compiled by BloombergNEF (BNEF) in its 1H 2020 Corporate Energy Market Outlook, up from 13.6GW in 2018, and more than triple the activity seen in 2017.

The title of this report, "Think GIG", reflects how companies and countries are becoming increasingly ambitious with their power purchase agreements, and thinking in gigawatt terms.

But the market still has some misgivings about the model, due to regulatory restrictions, project risks and costs, according to the findings of a market survey conducted by European law firm Fieldfisher.

Here, our energy experts consider feedback from the CPPA market and explain how to achieve successful agreements.

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Introduction: Power to the purchaser

Europe's renewable energy companies are looking beyond government subsidies to fund the next generation of power projects – relying increasingly on direct sales of electricity to corporate end users via corporate power purchase agreements (CPPAs).

As the renewables industry in Europe becomes increasingly subsidy-free, opportunities are beginning to open up for corporate buyers seeking long-term, low-carbon energy deals.

In a survey of power market actors conducted by Fieldfisher, just 10% of those questioned said they had difficulty in finding suitable partners for CPPAs, illustrating the market's gusto for these types of deals.

Important buy-side drivers for entering CPPAs include opportunities CPPAs offer to hedge against fluctuating wholesale energy prices; profitability stemming from long-term price certainty; and the brand kudos that comes with procuring energy from renewable sources.

Reasons for not entering CPPAs include regulatory barriers; difficult strike price negotiations; inflexible length of contract term; unpalatable risk-sharing arrangements; and prohibitive transaction costs.

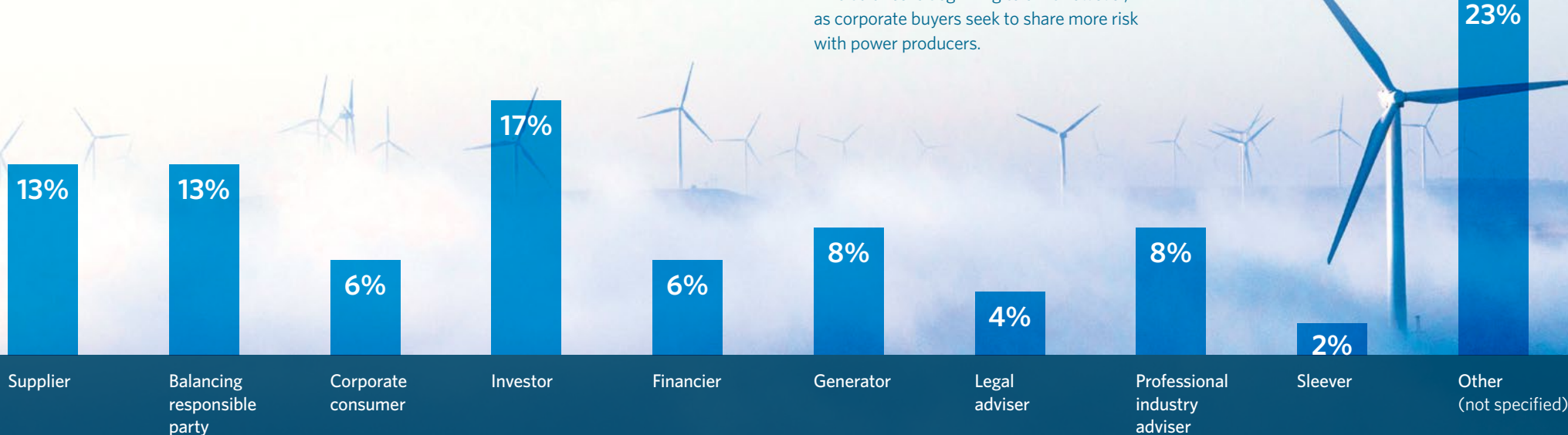
As interest in CPPAs increases rapidly in Europe, this paper looks at the key push and pull factors, and how the risks they represent can be managed.

Risk re-allocation

CPPAs involve a significant re-allocation of risk, compared to the traditional utility supply model, with the buyer taking on most of the risk. This balance is beginning to shift however, as corporate buyers seek to share more risk with power producers.

Early buy-side entrants to the CPPA market were driven principally by environmental and social governance (ESG) factors. As markets have developed, volatile energy prices and rising demand for power are encouraging more industrial and commercial end users to consider CPPAs as a hedge against rising costs and volatility.

For power producers, winding down of renewable subsidy regimes in Western Europe has made securing long-term offtake contracts even more important for generators and forced them to take on a different risk profile.



CPPA survey respondents by function

Source: Fieldfisher survey, October 2019

Headline findings

77%

of respondents would consider a CPPA for
onshore wind power

70%

of respondents expect
**power delivery to be on
an 'as produced' basis**

Financial advantage

is a major driver of Europe's CPPA market

Standardised documentation

would benefit the CPPA market

73%

of respondents would
consider financially settled
CPPAs **BUT** financial
regulatory requirements

are a major concern for the market

Source: Fieldfisher survey October 2019

To CPPA or not to CPPA?

Yes

- › Hedge against fluctuating wholesale energy prices
- › Profitability from long-term price certainty
- › Lower carbon footprint
- › A 'must have' for some investors
- › Brand kudos

No

- › Regulatory barriers
- › Difficult strike price negotiations
- › Inflexible length of contract term
- › Unacceptable risk-sharing arrangements
- › High transaction costs

Europe's CPPA landscape

EU countries have different rules about the kinds of CPPAs they will allow.

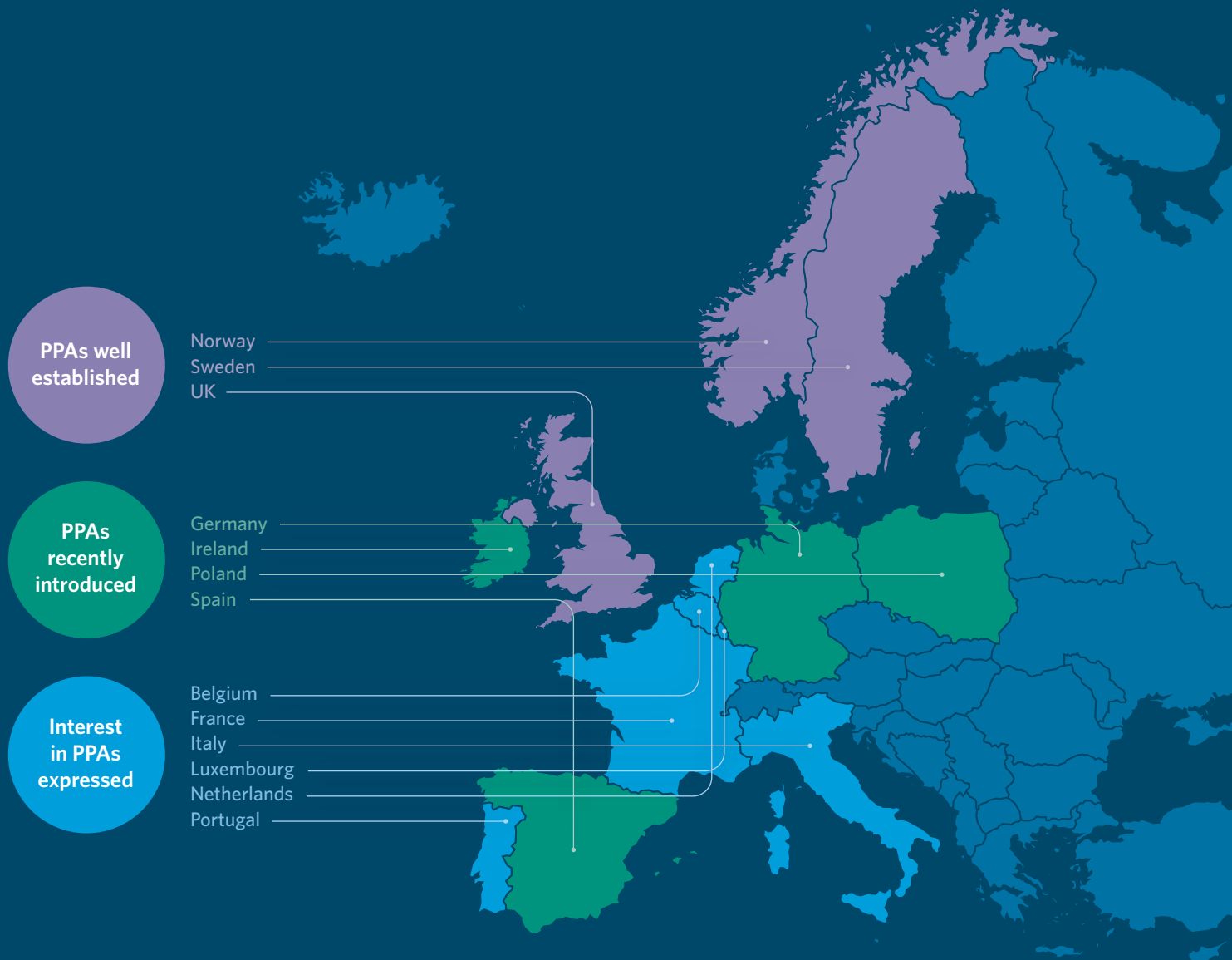
In France and Germany, direct sale (or direct marketing) is mandatory to qualify under renewable energy support schemes, such as the supplementary remuneration mechanism.

Direct sale/marketing is a mechanism and prerequisite proper to the regulatory regime for support to renewable energy in France and Germany.

In the UK and the Netherlands, a producer can sell energy at the meter from the point of exit of the production installation to the final industrial customer, even in the absence of a direct physical connection, by using a 'sleeving' mechanism (see Appendix - Types of CPPA).

Nordic countries currently have the most CPPAs in Europe and the UK is also one of the better developed markets when it comes to CPPAs, as its regulatory framework allows for more flexibility than some EU Member States.

2018 saw Germany, Spain and Poland all settle their first CPPAs, and Benelux, French and Italian companies have expressed an interest in the sector, meaning Europe's CPPA map is likely to change rapidly and drastically over the next few years.



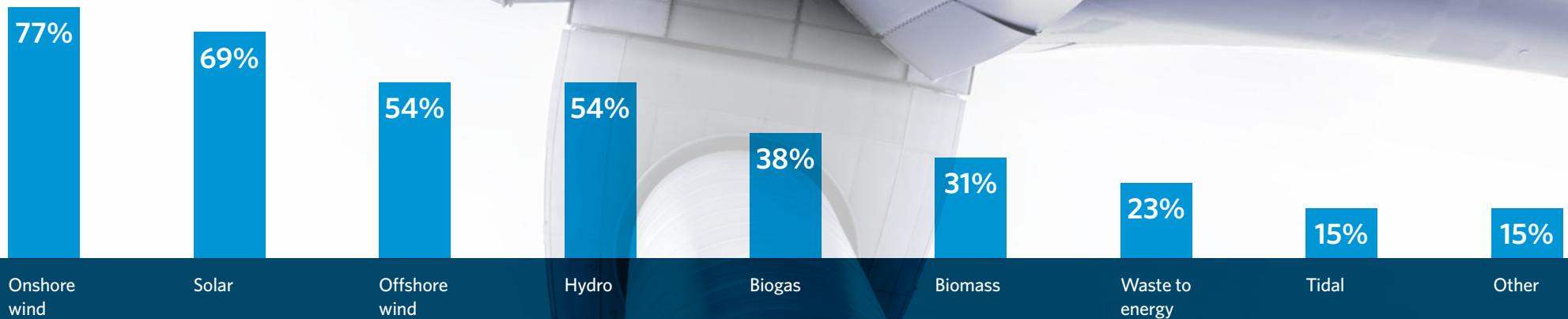
Power preferences

Based on Fieldfisher's survey of participants in the European CPPA market, onshore wind is the most popular form of energy generation, closely followed by solar, offshore wind and hydropower.

Among the least popular options were tidal power and waste-to-energy (WtE/EfW), while there was lukewarm interest in biogas and biomass generation.

The relative unpopularity of some technologies is likely due to the lack of available projects to contract with, compared to wind and solar, as well as the perceived riskiness of some of the technologies like WtE/EfW.

The lack of track record/troubled development history of other forms of generation, such as tidal projects, is also a probable factor behind the lack of enthusiasm for these green energy alternatives.



Preferred power-generating technologies for corporate PPAs in Europe

Source: Fieldfisher survey, October 2019 (Respondents were permitted to select multiple answers)

Managing financial exposure

Industry participants that responded to Fieldfisher's survey indicated that financial motives are the main reason for entering a CPPA.

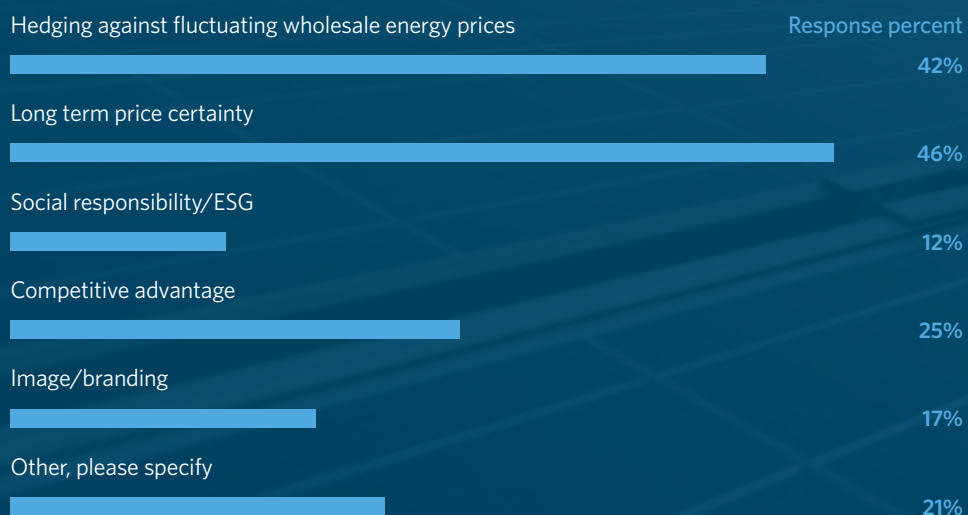
46% of those surveyed said the opportunity for long-term price certainty was the chief incentive, while 42% said the chance to hedge against wholesale price volatility was the principal driver.

Around a quarter of participants also said that the perceived competitive advantage offered by CPPAs was a primary motivation for entering agreements.

Less prominent, but nevertheless significant, reasons for signing CPPAs included ESG factors and the chance to reduce carbon footprint by locking in renewable energy supply.

Market participants also indicated that CPPAs are becoming a 'must have' for some bank financing deals for renewables developments – a trend that is likely to strengthen as subsidy regimes are phased out. Corporate offtakes enable more projects to be built by providing financing, so increasing demand for clean energy is expected to foster more CPPAs.

What is your primary driver in entering into a corporate CPPA?*



Influential investors in renewable energy

Climate Action 100+ is an investor initiative launched in 2017 to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change.

The initiative involves more than 370 investors with over US\$35 trillion in assets collectively under management, including:

- › BlackRock
- › California Public Employees' Retirement System (CalPERS)
- › Cathay Financial Holdings
- › China Asset Management Co., Ltd.
- › Ceres
- › HSBC Global Asset Management
- › Manulife Investment Management

Pressure from these influential investors, which have pledged to help drive the clean energy transition through their investing power, is expected to push more companies to adopt renewable CPPAs.

*Respondents were permitted to select multiple answers

“We are experiencing a constant stream of demand from corporates, energy suppliers, investors and financial institutions to advise on PPAs as these contracts become an increasingly central element in their energy strategy.”

Source: Daniel Marhewka, corporate and energy partner, Fieldfisher



CPPA risks: New model approach

The nature of CPPAs is evolving rapidly. Under 'new style' CPPAs, there has been a noticeable trend towards power customers seeking to push more risk onto project developers.

Agreements negotiated today require power producers to take more responsibility and accept liability for not delivering on construction timelines and specifications; technological performance; volume commitments and price risk – all of which is intensifying focus on CPPA contract negotiation.

Market participants are also looking to share ownership of regulatory risk, which cannot be removed but may be mitigated through certain contract mechanisms, such as change in law clauses which aim to preserve balances struck under existing regimes.

Construction risk

Construction risk is one of the most significant risks for new-build power generation projects.

The construction phase of any project tends to involve large capex, commissioning and contractor risk.

Under the utility supply model, where corporate customers simply enter energy supply contracts with a utility and the utility assumes the whole procurement risk, end users do not face construction risk.

However, end users that want to ensure additionality are often willing to take some construction risk.

The principle of additionality is satisfied when the end user can demonstrate that, without its input (in the form of a CPPA), the asset would not have been built (and hence, the end user's actions have brought additional renewable capacity onto the system).

An end user with strong ESG motivations may be prepared to take construction risk (particularly delay in project completion) in order to satisfy its objectives.

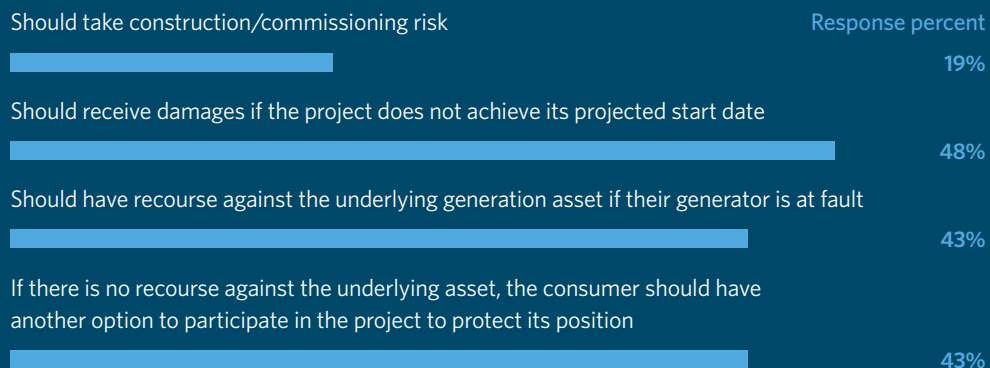
If, however, the end user's reasons for entering a CPPA are more financially-oriented, they may be less likely to accept any construction risk.

Some CPPAs have started imposing firm sale commitments from stated start dates, meaning the supplier is bound to deliver power from an agreed date, or pay a penalty.

Around half of those who responded to Fieldfisher's survey said they believed the end user in a CPPA should receive damages if a generation project misses its start date.

Where financial considerations are key, this is logical as price benefits under the CPPA will be delayed if the project is not completed on time.

On a new build project, do you think that the consumer under a CPPA:*



Sharing and underwriting construction risk

Fieldfisher's survey feedback suggests the market is sharply divided over who should accept liability for construction risk, or for other factors that cause delays in project timelines.

This indicates that new risk-sharing approaches need to be developed between buyers and sellers, either in relation to construction risk alone or across the whole contract, so different risks are borne by each party.

*Respondents were permitted to select multiple answers

“Around half of those who responded to Fieldfisher's survey said they believed the end user in a corporate PPA should receive damages if a generation project misses its start date.”

Source: Fieldfisher survey, October 2019

Volume risk

CPPAs present particular issues with regard to volume risk, as many renewable technologies only provide intermittent output.

The extent to which the generator is required to provide electricity to compensate for volumes which are not delivered due to intermittency varies a great deal.

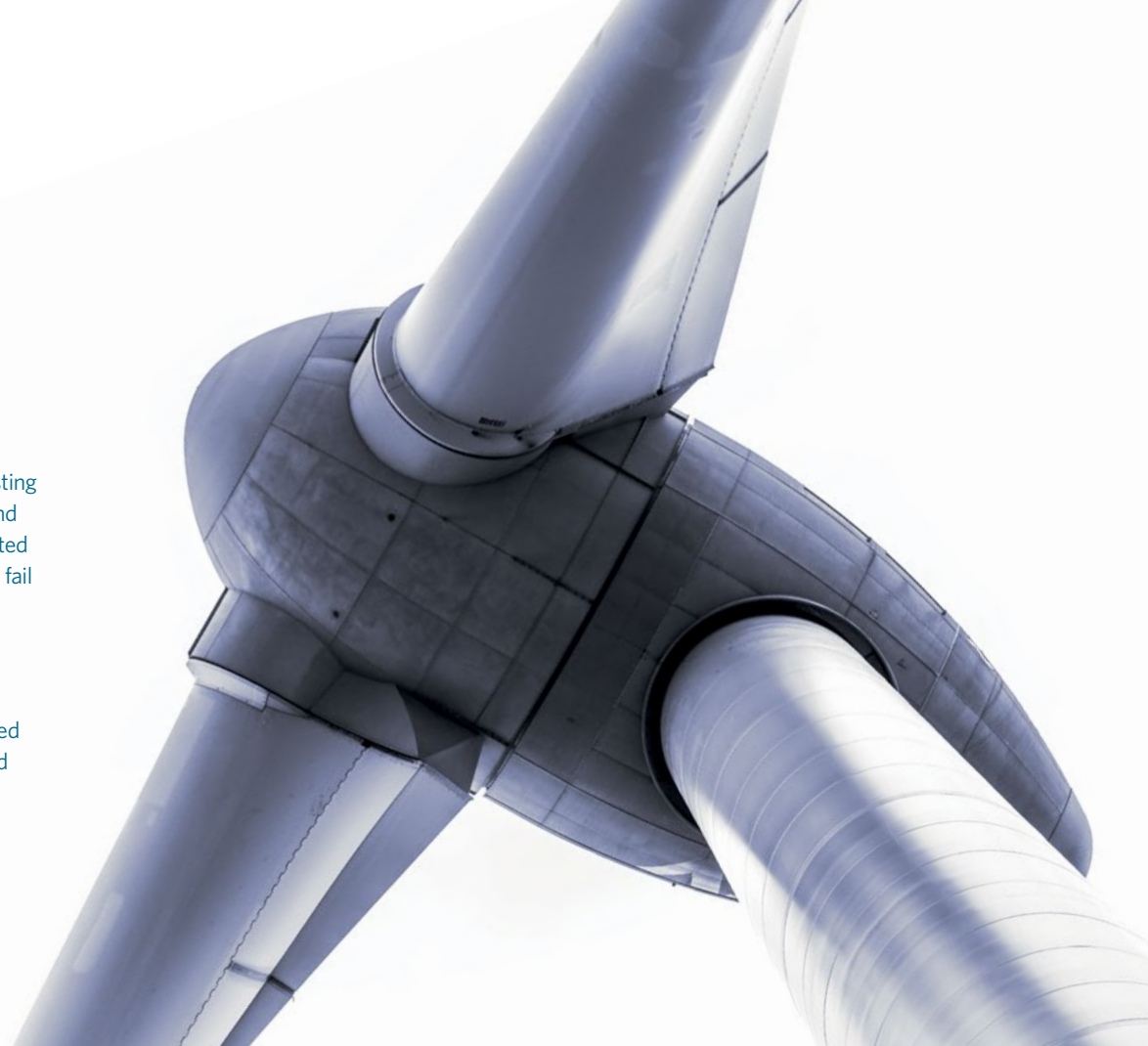
Historically, generators were simply required to generate and the end user would take electricity on an 'as produced' basis.

As the end user takes its actual power needs from the grid via a licensed supplier, the issue is not about the end user having access to electricity, but rather the allocation of volumes between the wholesale market and the generator.

As the market has evolved, and output forecasting has improved, generators have had to adapt and may now be required to forecast their anticipated output and face financial consequences if they fail to deliver to that forecast.

This view is borne out by Fieldfisher's survey findings.

A clear majority (around 70%, which included both power purchasers and sellers) expected power to be delivered through a CPPA as produced, while 30% said power should be supplied on an 'as forecast' basis.



Would you expect delivery of power under a CPPA to be:

On a as produced basis

Response percent



68%

On a as forecast basis

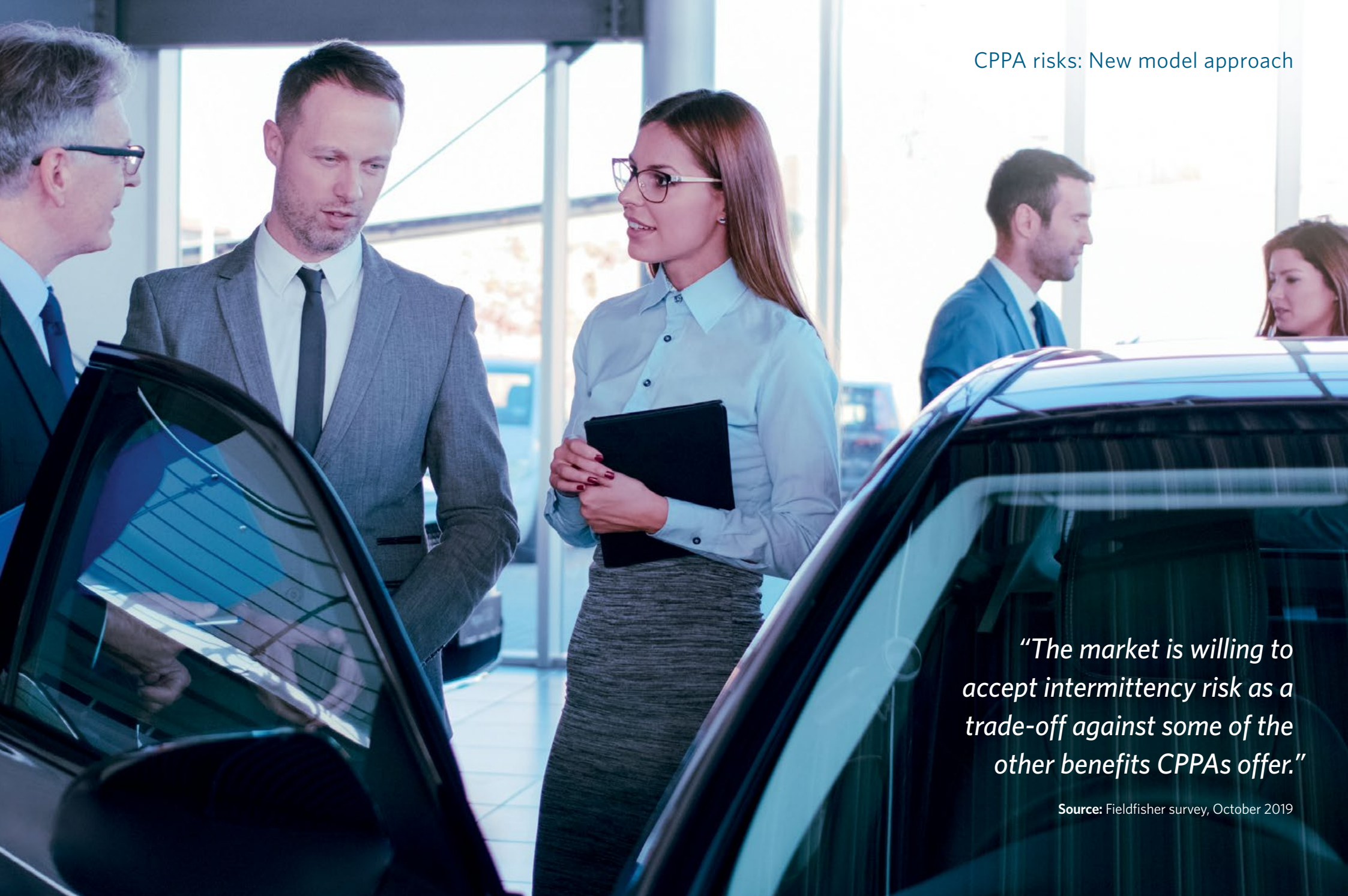


32%

Power should be delivered as produced

Compensating for intermittency can threaten the economic viability of some renewables projects.

However, it appears the market is willing to accept intermittency risk as a trade-off against some of the other benefits CPPAs offer.



“The market is willing to accept intermittency risk as a trade-off against some of the other benefits CPPAs offer.”

Source: Fieldfisher survey, October 2019

CPPA risks: New model approach

Volume risk continued

This indicates appreciation of the intermittency issue by the CPPA market, and suggests volume risk does not significantly undermine support for these types of deals.

However, it also shows that there is a development from a historically as produced only market towards a more mature 'as forecast' market,

since many producers with increasing experience are becoming more confident in taking volume risk in return for higher remuneration.

Where parties agree that power will be delivered as forecast, the majority of respondents thought forecasts should be made on a day-ahead basis, and that the generator should bear financial responsibility for balancing.

This represents a significant shift in risk-sharing sentiment, as typically generators have had no involvement in balancing markets.

As a result, they may now have to procure balancing and market services from a suitably qualified entity, which will likely erode their income under a CPPA.

Interestingly, more than half (60%) of respondents said they would be prepared to participate in wholesale energy markets, which suggests a move away from the traditional market model where neither the generator nor the end user had any interest in the wholesale sector.

Which party to a CPPA would you expect to bear financial responsibility for balancing risk?



More balancing risk for generators

Market participants surveyed by Fieldfisher generally felt generators should accept more financial responsibility for balancing risk, a shift from previous models where power generators have shouldered relatively little risk.

In addition to requiring arrangements for the physical delivery of electricity, balancing risk (the difference between what the generator says it will produce and what it actually produces) will need to be managed, which will again involve a suitably regulated/qualified entity.

Early CPPAs typically saw the end user take responsibility for managing balancing risk, but the position is moving towards the generator having to bear at least some balancing risk – either by sourcing additional power in the market, or by financially settling any difference between nominated and delivered volume.

When delivery of power is on an as forecast basis, how far ahead of real time would you expect forecasts to be given?*



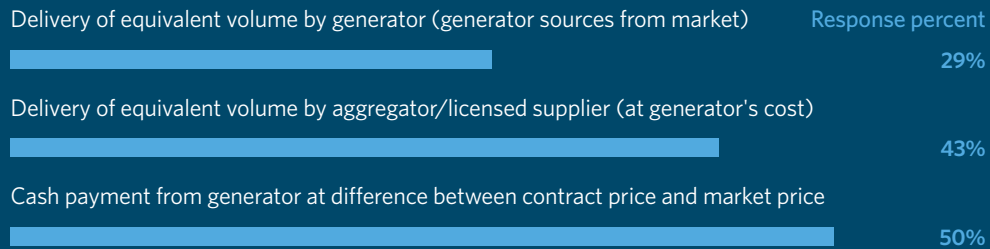
Day-ahead forecasting preferred

For power supplied as forecast, market participants overwhelmingly (80%) said that forecasts should be provided a day ahead, as opposed to on the day of delivery.

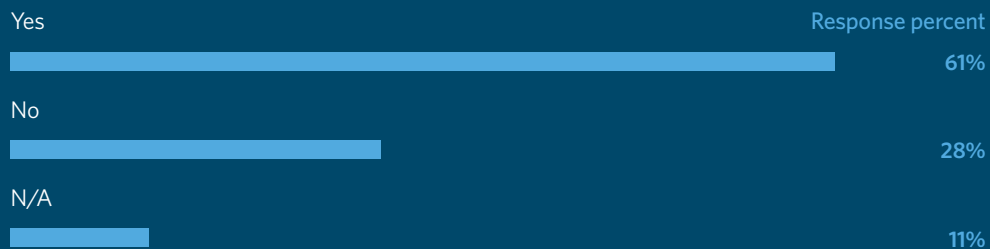
*Percentages reflect views of the 32% of respondents who felt that delivery of power under a CPPA should be on an as forecast basis (see p11)

Volume risk continued

Where delivery of power is on an as forecast basis, which of the following remedies would you expect for the generator not delivering as forecast?*



In order to facilitate signing a CPPA would you be prepared/able to participate in the wholesale energy trading markets?



Remedial liability split

Where power is not delivered as forecast, survey respondents split over how they expect shortfalls to be remedied.

Around 50% said they would expect a cash payment from the generator, while only slightly fewer thought an aggregator/licensed supplier should make up the deficit at the generator's cost.

A significant minority (28%) of respondents expect the contracting generator to take responsibility for sourcing missed forecast volumes from the third party suppliers.

Greater role for wholesale energy markets

Around 60% of those surveyed by Fieldfisher said they would be prepared to participate in wholesale energy markets, if it was necessary for both sides to enter a CPPA.

*Respondents were permitted to select multiple answers

CPPA risks: New model approach

Price risk

A long-term offtake contract is an essential element in the financing of any renewable energy project and, as a form of offtake agreement, CPPAs can be a key enabler of renewable energy developments, if they meet certain criteria.

Generators (and more specifically, their investors), require predictable income over a period of time that is longer than the tenor of the proposed loan for the project.

Typically, this translates into a CPPA term of between 10 and 15 years (which is reflected in the survey results as, with 48% of respondents choosing this as the ideal contract lifespan).

End users, on the other hand, are increasingly looking to hedge their exposure to rising electricity prices and price volatility – a function which a long-term CPPA with the right pricing structure can perform.

However, while tenures of 20-25 years are potentially more appealing from hedging and debt amortisation perspectives, longer agreements bear certain risks.

Accurately predicting electricity prices is difficult, and it is standard practice for commercial consumers to procure power on rolling 18-36-month contracts, which allow for regular price reviews or change of supplier. A CPPA turns this on its head, by fixing a price for a long period of time.

Setting prices at, or close to, the 'correct' level is key, as getting this wrong can have drastic consequences for one side or the other.

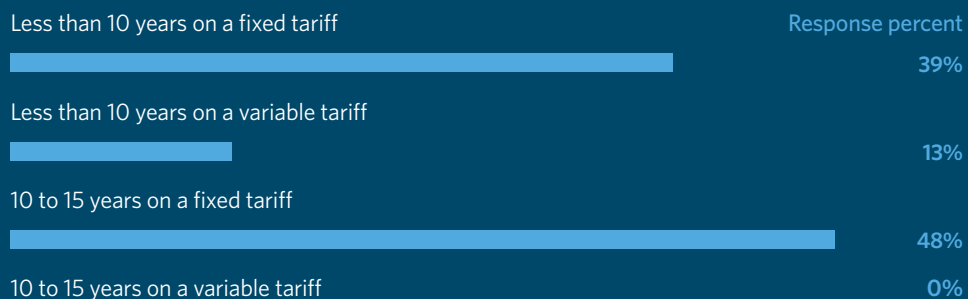
Not all CPPAs have a fixed price mechanism, and in some markets, there have been moves toward more sophisticated pricing structures that allow for price re-openers in response to significant market movements.

Other approaches include floating price structures with a cap and floor (meaning that prices are essentially fixed within a range) to prove mutually acceptable risk mitigation for the parties. Parties can also agree to set prices by reference to relevant indexes, other than wholesale energy prices.

Alternatively, short-term CPPAs can help suppliers secure deals, as buyers may be prepared to commit to strike prices for shorter periods if there is perceived to be a high risk of wholesale prices falling.

Even though most renewable project developers require purchasers to sign up for at least 10 years of power supply in order to satisfy their lenders, length of commitment was not highlighted by Fieldfisher's survey respondents as a major barrier to entering CPPAs (only 20% of those who responded indicated that this was an issue).

What is your preferred duration for a CPPA?*



10-15 year fixed tariff sweet spot

The most favoured duration for CPPAs among Fieldfisher's survey respondents was 10-15 years on a fixed tariff (48%), however the next most popular option (39%) was a fixed tariff for less than 10 years, suggesting that short CPPA tenors are likely to be favourable where bankability demands permit signing up buyers for short-term periods.

*Respondents were permitted to select multiple answers

Managing financial exposure

“PPAs are becoming a 'must have' for some bank financing deals for renewables developments.”

Source: European investor



Contract risk

At present, CPPAs are all bespoke. On the upside, this lack of standard for agreements means parties can draw up contracts that suit the particular circumstances of both sides.

However, the lack of any form of standardised documentation means that developing a CPPA from scratch can be expensive, time-consuming and leave parties struggling to identify and evaluate risks.

With the exception of the EU's RED II (see below), there is no specific regulatory framework for the support or promotion of CPPAs at the level of European law, and currently no standardisation of contracts across the EU.

More than 90% of those who responded to Fieldfisher's survey said they would favour the introduction of standard form contracts that would help synchronise the market.

In June 2019, the European Federation of Energy Traders published a standard form CPPA, endorsed by the RE 100 (a global corporate leadership initiative bringing together influential businesses committed to 100% renewable electricity).

This is a welcome step forward, but time will tell whether this template is widely adopted.

There has arguably been greater progress towards standardisation in the US, largely because the structure of US electricity markets makes it easier to implement a financial CPPA there than in Europe.

The US also benefits from well-established standard form derivatives documents, such as ISDA, that parties can adapt to suit CPPA structures.

Do you think standardisation of the CPPA documentation would be beneficial?



Standardised documentation

Around 90% of market participants who responded to Fieldfisher's survey said that standardisation of CPPA documentation would benefit the industry.

Power purchase is not a core business issue for most companies, and the cost and complexity of negotiating contracts can be a major hurdle for small-to-medium-sized enterprises.

Until standard documents and common practices are established, it is likely that CPPAs will continue to be assessed on a case-by-case basis by regulators and lenders.

“Financially settled CPPAs will most probably be considered as derivatives and be subject to the same financial regulatory requirements as derivatives. This is an underestimated issue.”

Source: David Haverbeke, energy regulatory partner, Fieldfisher

Regulatory risk

The EU's generally pro-renewables stance coupled with its carbon emission reduction targets mean that regulation is not perceived as a major risk to the CPPA market, however there are a number of regulatory issues that may hinder CPPAs.

Financial regulatory requirements for financially settled CPPAs

Financially settled CPPAs will principally be considered as financial instruments according to MiFID II, i.e. derivatives, and potentially subject to various financial regulatory requirements.

According to Fieldfisher's experience and feedback from the market, this is an underestimated issue that most market participants do not fully consider in their contracts or planning relating to reporting requirements during the term of a CPPA.

In Germany, for example, according to applicable laws and the administrative practice of the German Federal Financial Supervisory Authority (BaFin), transactions in connection

with electricity trading activities are considered as derivatives (and thus financial instruments) if they are not intended to be physically settled.

Due to their classification as derivatives, financial regulatory standards and legislation have to be complied with. These laws are a key entry point for financial regulation.

Our financial regulatory specialists across Europe regularly support clients with their financial regulatory obligations, the related wording in financially settled CPPAs and analysis of when relevant thresholds are exceeded.

Accounting issues

Committing the entire capacity of an asset to an end user under a long-term agreement on an exclusive basis may lead to the agreement being classified as a lease for accounting purposes.

Parties to a CPPA will need to take advice on whether this is the case and, more generally, on the accounting implications of any CPPA.

Some end users have split the capacity of an asset so that the CPPA provides exclusivity in respect of only part of the installed capacity, with the rest sold on a merchant basis.

Whether this addresses potential accounting issues will depend on the circumstances. Such an arrangement will often also involve splitting electricity exported to the grid across a single meter point, which can be tricky depending on the relevant grid access rules.

Under a financially settled CPPA, there may also need to be derivative accounting, which may be a further challenge for market participants.

Would you consider a financially settled CPPA?



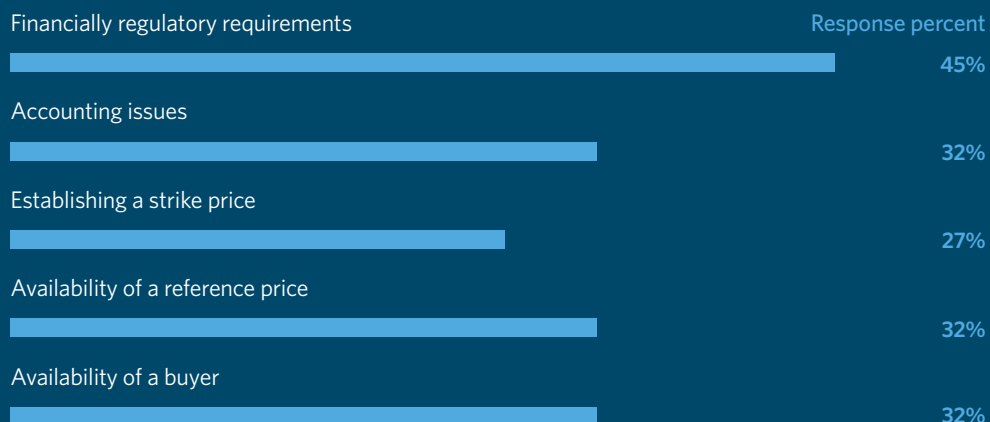
Financially settled CPPAs preferred

Around three quarters of those surveyed by Fieldfisher said they would consider a financially settled CPPA.

In the absence of tried and tested alternative price structures, risky fixed price contracts are likely to dominate the market in the near term.

Regulatory risk continued

With respect to a financially settled CPPA would you be concerned about:*



*Respondents were permitted to select multiple answers



Financial CPPA concerns

Financially settled CPPAs are not without perceived risks or issues, chief among them, according to survey respondents, being regulatory financial obligations, potential accounting issues, suitable reference pricing and access to offtakers.

Anecdotal evidence suggests that concerns around accounting and strike prices are partly due to a lack of understanding of these issues, rather than a history of problems created by these factors in CPPA contracts.

RED II and REMIT

The EU's December 2018 adoption of the recast Renewable Energy Directive (RED II) requires the removal of some of the regulatory barriers that may have deterred some market participants from entering CPPAs, and further incentivises EU Member States to support the CPPA market.

RED II commits the EU to pursuing ambitious targets for CPPAs, including a binding EU-wide goal of 32% renewable energy generation by 2030. Member States must transpose RED II into national legislation by 30 June 2021.

Progress under RED II will be monitored through national renewable energy action plans, which Member States are obliged to submit pursuant to the directive.

RED II also:

- a) Requires Member States to recognise guarantees of origin (GoOs) issued by other Member States in accordance with RED II; and
- b) Clarifies that Member States may allow the issue and transfer of (GoOs) directly to corporate offtakers pursuant to a CPPA from renewable generators that already receive financial support from a support scheme (e.g. feed-in tariffs).

Member States can however still opt not to allow the issue of (GoOs) in this way for renewable generators that already benefit from a financial support scheme.

CPPA risks: New model approach

Regulatory risk continued

While the implementation of RED II by EU Member States will not remove all regulatory risk to CPPAs, as its practical implications will partly depend on how each Member State transposes the directive into national law. The vision to create an enabling framework to facilitate the transfer of GoOs across borders and encourage CPPAs should make it easier for market participants to navigate regulatory hurdles.

In addition, depending on the volumes covered by the CPPA (the threshold is 600GWh electricity per year), the parties will need to comply with the requirements, in terms of publication and notification of data with the relevant national regulatory authority, of EU Regulation 1227/2011 on Wholesale Energy Market Integrity and Transparency (REMIT).

Competition and State Aid law

Another regulatory condition to be taken into account when drafting CPPAs is the fact that connecting several companies in the same relevant market via this type of contract with a single renewable energy project can raise competition concerns.

Multiple buyers can arrange CPPAs with the same generator either via separate CPPAs, or through a buyer vehicle which acts on behalf of all buyers.

Of the two approaches, creating a buyer vehicle is likely to be the more challenging in terms of documentation and will be less flexible than having separate CPPAs, which matters because not all buyers will need to purchase power on the same terms.

If a CPPA structure is envisaged by, on the one hand, a producer or supplier and, on the other hand, a consortium of industrial off-takers competing in similar products and geographical markets, data sharing arrangements should be carefully drafted and monitored to ensure the resulting arrangement is not anti-competitive.

Many regimes that are designed by Member States to ensure competition in the electricity sector have, within the boundaries set by State aid law, restrictions on large consumers exclusively committing to a single supplier for a majority of their demand over an extended period.

These situations require individual analysis, as restrictions will often be tailored for different circumstances and may potentially be waived for a CPPA.

Ideally, competition regulators will adopt balanced approaches to CPPAs, single or multiple, that ring fence large volumes of energy and consider issuing guidance outlining where power procurement might impact the market and risk breaching competition law.



CPPA risks: New model approach

“Anecdotal evidence suggests that concerns around accounting and strike prices are partly due to a lack of understanding of these issues, rather than a history of problems created by these factors in CPPA contracts.”

Source: Lis Blunsdon, energy regulatory partner, Fieldfisher



Future tendencies

While regulatory movements and energy price volatility are beyond the control of CPPA market participants, it is within the industry's power to seize control of risk allocation.

Many of the issues highlighted by Fieldfisher's survey indicate disagreement within the market over who should bear risks for various aspects of CPPAs; but, rather than stifling the market, these differences should serve as a starting point for contract negotiation.

Some recent CPPAs have introduced radical changes to the relatively low levels of risk traditionally accepted by renewable generators, particularly as some influential buyers press for firm contracts with potentially unlimited liability for the costs of providing replacement power.

From a regulatory perspective, time will tell whether administrative obstacles at member state level will be effectively addressed by national authorities or the European Commission.

Advisers in this area are watching closely to see whether the implementation of the Clean Energy Package and in particular RED II will result in a change in the principle of network and supplier usage and whether the energy sector evolves to make it generally acceptable to regulators for producers to sell electricity directly to customers.

With accelerating regulatory change, technological development, and shifting market dynamics, more variants will emerge to shape post-subsidy business models for renewables.

Industry and regulators will need to work together to find the right mix of technical solutions and commercial structures to effectively de-risk new models and muster the low cost capital required to finance them.

About the survey

The contents of this report were based on an industry survey, conducted by Fieldfisher in October 2019, of clients and contacts with interests in the CPPA sector. Participants included power producers, consumer, consultants and network operators.

Contributors to the survey included:

- › Energy suppliers
- › Balancing responsible parties
- › Corporate energy consumers
- › Investors
- › Financiers
- › Generators
- › Investment advisers
- › Legal advisers
- › Industry consultants

Feedback was provided on an anonymous basis and the information was collated and analysed internally by Fieldfisher, with the input from expert energy regulatory and corporate lawyers from across the firm's network of European offices.

About Fieldfisher

Fieldfisher is a European law firm with market leading practices in many of the world's most dynamic sectors. We are an exciting, forward-thinking organisation with a particular focus on energy & natural resources, technology, finance & financial services, life sciences and media.

Fieldfisher's dedicated energy team advises companies, commodity trading houses, banks and investment funds on a wide range of matters. We have been active in energy and natural resources for over 50 years and have a team more than 100 lawyers internationally in this sector.

Our network has more than 1,550 people working across 25 offices providing highly commercial advice based on an in-depth understanding of our clients' needs.

We operate across our offices in Amsterdam, Barcelona, Beijing, Belfast, Birmingham, Bologna, Brussels, Dublin, Düsseldorf, Frankfurt, Guangzhou, Hamburg, London, Luxembourg, Madrid, Manchester, Milan, Munich, Paris, Rome, Shanghai, Turin, Venice and Silicon Valley.

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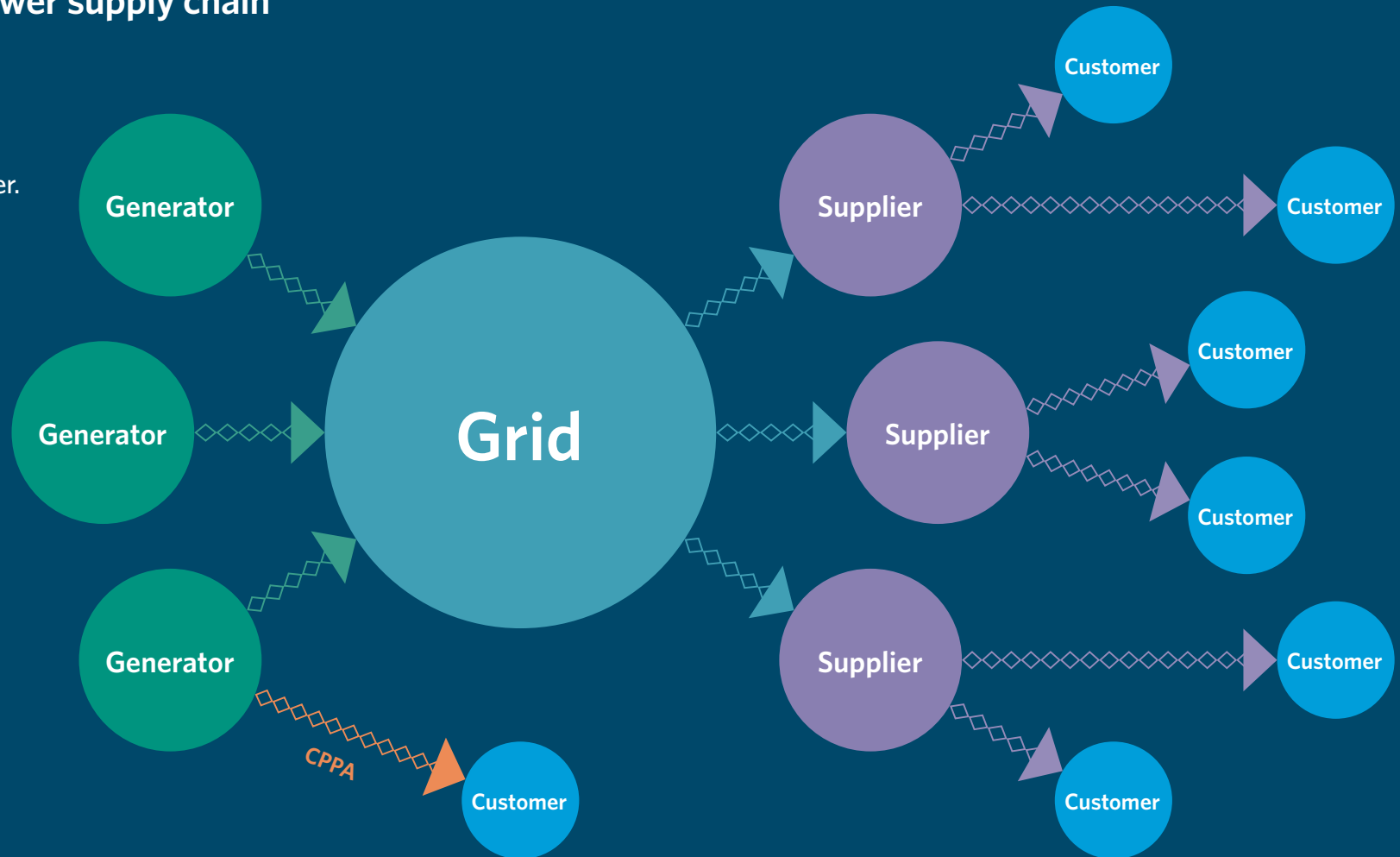
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Appendix: What are CPPAs?

CPPAs' place in the power supply chain

A CPPA is a contractual energy supply arrangement directly between a corporate end user and a renewable energy producer.

Whereas, traditionally, corporate end users procured electricity from utility suppliers who source power in wholesale markets and deliver it to customers via a fixed grid network, CPPAs establish a direct contractual relationship between the generator and the end user.



Appendix: Types of CPPA

Generally, CPPAs conform to one of two structures, 'physical' or 'virtual' (also known as 'financial').

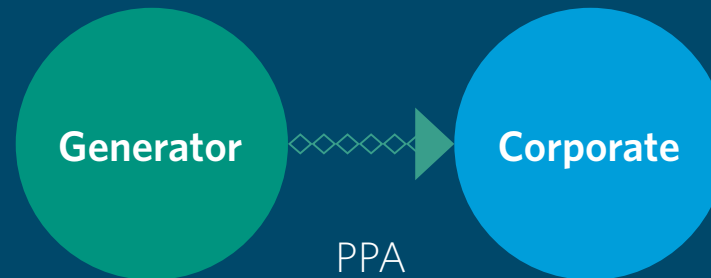
Physical corporate PPAs

Physical/direct CPPAs, also known as 'sleeved' CPPAs, are between a renewable energy generator and an end user and require the generator to sell the electricity produced by a particular asset to the end user.

Because electricity can only be delivered through wires, and operation of and access to those wires is invariably regulated, unless the generator and end user are physically connected by a private wire, the end user's obligation to purchase electricity cannot be performed by the end user itself.

The solution, where permitted by the regulatory regime, is for the end user to appoint a suitably regulated entity (usually a licenced energy supplier) to 'sleeve' the electricity from the delivery point at the generating asset to the end user's premises.

Contract



Power



Appendix: Types of CPPA continued

Virtual CPPAs

Virtual CPPAs, otherwise known as 'financial' or 'synthetic' CPPAs, are financial hedges whereby the end user pays the generator an agreed strike price over the life of the agreement.

The generator must still sell its physical power to a buyer, and will receive a 'market price' for that power from the buyer and a payment from the end user.

The payment could be a difference payment (as under a contract for difference) based on an agreed strike price, or a 'top-up' payment more akin to a feed-in tariff (FIT) payment.

The end user also enters separate arrangements for the supply of equivalent volumes of power to be delivered to its premises.

Depending on how arrangements are structured, the end user's supplier may physically take the electricity generated by the generator.

Network operators, energy suppliers and balancing parties often remain involved in these virtual contractual structures to delineate respective roles and responsibilities.

There are, however, various ways to structure these wider arrangements.

