Global construction update

The nuclear issue

December 2022

ReedSmith

Driving progress
through partnership

Construction news

- Reed Smith was shortlisted for Real Estate & Construction Team of the Year at The Oath Middle East Legal Awards 2022
- James Willn (Dubai) was appointed to Law360's 2022 Editorial Advisory Board – Construction
- Our team hosted a construction breakfast briefing on "Sustainability challenges in the UAE"

Contents

Global construction update

Welcome

Welcome to this edition of Reed Smith's Global Construction Update.

As 2023 draws to a close, Reed Smith's global construction team is ending the year with a focus on nuclear power projects. In light of the ever-growing consensus around the climate emergency and the tense global situation surrounding Russia's war with Ukraine, the interest in nuclear power as an alternative energy solution is certainly strong. According to the World Nuclear Association, around 100 nuclear power reactors with a total gross capacity of about 100,000 MWe are either on order or planned, and over 300 more are proposed, with most of these in Asia. Further, the International Atomic Energy Association has projected that nuclear energy could contribute up to 12 percent of global electricity by 2050.

In this edition of Reed Smith's Global Construction Update:

- Liam Hart (London) considers how to negotiate the standard form New Engineering Contract when used for nuclear power projects.
- James Willn and Finlay Donaldson (Dubai) explore the defining and unique characteristics of disputes involving nuclear power plants, including security and sanctions perspectives.
- Our Paris Construction Team explores important legislative developments in France around nuclear energy.
- Christopher Edwards (Dubai) interviews Liam Hart (London) on his nuclear power plant disputes practice and what's keeping his clients up at night.

We also celebrate the successes of our global construction team over the second half of 2022:

- Peter Rosher is listed in *Who's Who Legal* as: Global Leader - Construction 2022, Thought Leader – Construction 2022, Thought Leader – France – Construction 2023, and National Leader – France – Construction 2022
- Michelle Nelson is listed in *Who's Who Legal* as: Thought Leader Global Elite – Construction 2023, Thought Leader – Construction 2022, and Global Leader - Construction 2022
- Sachin Kerur is listed in *Who's Who Legal* as: Global Leader - Construction 2022.
- Sachin Kerur has been listed among the 100 most influential figures in the Middle East construction industry by the region's leading construction publication, *Construction Week*.
- Sachin Kerur and Michelle Nelson have both been included in *The Legal 500 EMEA 2022* – United Arab Emirates, Construction – Hall of Fame.
- Peter Rosher has been ranked for Construction and International Arbitration, with Vanessa Thieffry included in the Best Lawyers "Ones to Watch" category – *Best Lawyers* 2023 France.

Our construction lawyers have been busy presenting seminars:

- Jane Miles (Dubai) has presented at various events throughout November 2022, including a Construction Masterclass in Dubai on "The Future of Construction and Dispute Resolution," a restructuring and insolvency practitioners event on construction and insolvency during Dubai Arbitration Week, and a CIOB and RICS construction masterclass event on regional courts and arbitration.
- On November 15, 2022, Sachin Kerur (Dubai) was a panelist at the International Contracting Conference held at the Riyadh International Convention and Exhibition Centre under the patronage of the HE Minister of Municipal, Rural Affairs, and Housing.
- On November 29, 2022, Michelle Nelson, Dubai, was a panelist at Construction Week Middle East's "Women in Construction Conference," speaking on the topic "Building Bridges: Diversity in Arbitral Tribunals."

- James Willn (Dubai) was appointed to *Law360*'s 2022 Editorial Advisory Board – Construction and was quoted in a *Law360* article on "Modular Construction."
- In November 2022, the ENR Paris team taught on International Construction Contracts at Paris Assas University (Peter Rosher and Erwan Robert) and Sciences Po (Peter Rosher and Clément Fouchard).
- On October 27-28, 2022, the ENR Paris team was involved in the SCL/AFDCI Astra event, with senior associate Vanessa Thieffry sharing legal perspectives on October 27, during a panel on "Underground Works: Managing the Unknown," and senior associate Erwan Robert (YPCP) on October 28 introducing Sir Rupert Jackson's keynote speech on "construction arbitration in the new age."
- The ENR Paris and London teams (Peter Rosher, Vanessa Thieffry, and Liam Hart) contributed to Reed Smith's "Energy Transition – an evolving journey" report on "The nuclear new build renaissance: Challenges and opportunities."
- Lianjun Li, Hong Kong, presented at a seminar hosted by the Shanghai Arbitration Commission on the construction of the International Maritime Arbitration Center.

We wish all our clients and construction industry colleagues a safe and happy holiday season.

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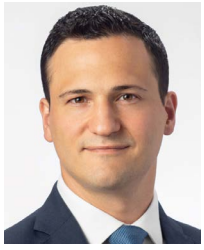

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Nuclear power plant disputes and Russian nuclear diplomacy

The Zaporizhzhia Nuclear Power Plant (Zaporizhzhia) in southeastern Ukraine is the largest nuclear power plant in Europe. Since March 2022, when Russian military forces took over control of the plant, it has been at the center of a dangerous power struggle between Russia and Ukraine.

The unprecedented global coverage of Zaporizhzhia has shone a spotlight on the unique and complex risks arising out of nuclear power plant (NPP) projects. From a contentious perspective, it is no surprise that disputes arising out of the construction and operation of NPP projects often give rise to some of the most complex arbitration proceedings.

In this article, we explore some of the defining and unique characteristics of NPP project disputes. >

Technical complexities

The construction and operation of NPP projects naturally give rise to extremely complex technical issues. In particular, NPP projects are required to comply with stringent licensing regimes in order to ensure the nuclear safety of a project. Understandably, the nuclear safety requirements take precedence over all other aspects of an NPP project.

The role of technical nuclear experts is fundamental in assisting the parties and the arbitral tribunal with understanding the technical elements of a dispute. The pool of experts is relatively small and includes retired regulators from other states with specific experience of the nuclear regimes arising out of the specific dispute. An instructed nuclear expert will often be asked by an arbitral tribunal to explain a specific licensing process and to assess the causes of any delays in the parties obtaining the relevant licenses.

Many delays in NPP projects arise from the requirements of the nuclear regulator, which will supervise the works and intervene where necessary, in order to ensure the nuclear safety of a project. The role of a nuclear expert will be invaluable in determining the foreseeability and likely consequences of a regulator's conduct during the works, which will then have a knock-on effect on the overall delay and quantum assessment of the dispute.

Third-party liability

A unique aspect of NPP project disputes arises out of the liability of an operator for third-party nuclear damage. Generally, operators of NPP projects are exclusively liable for damage caused by a nuclear incident in a nuclear installation or involving nuclear substances coming from such installations. This liability is absolute, applying irrespective of fault.

The third-party liability regime is governed by national laws, which are supplemented by international conventions, such as the Paris Convention on Third Party Liability in the Field of Nuclear Energy 1960 (the Paris Convention).

Liability is channeled exclusively to the operator (and only the operator) in order to avoid complex disputes to establish liability. This is in line with one of the fundamental aims of international nuclear conventions, such as the Paris Convention, which is to ensure that the growth and development of the nuclear industry as a whole is not hindered by bearing an intolerable burden of liability.

Due to the inherent risks to operators, third-party insurance is almost always procured, and in some jurisdictions, it is mandated by law. Often, third-party insurance is placed with a national insurance pool or into a specific mutual insurance association set up by the nuclear industry, such as Nuclear Electric Insurance Limited.

Security issues

Given both the symbolic and strategic importance of NPP projects, these plants are often susceptible to serious security threats, as we have seen with Zaporizhzhia most recently.

Historically, NPP projects have been the target of both physical threats and cyberattacks, which may lead to disputes arising out of security measures. Each NPP project will have detailed security measures aimed at preventing and identifying the theft, unauthorized access to, or illegal transfer of nuclear material and other radioactive substances.

Rather uniquely, ultimate responsibility for the security of nuclear facilities sits with national governments. This can lead to difficulties in the course of an arbitration where parties will often be required to obtain special security approval from the relevant governmental agencies in order to access strictly controlled and classified information relating to security measures. This will have a cost and time impact, and it may lead to difficulties in obtaining witness and expert evidence on such issues.

The parties will also need to agree with the tribunal at an early stage how the confidential information is to be managed and what measures are to be put in place in order to safeguard the handling of such information. This task may be further complicated if the arbitral tribunal and/or legal counsel for the parties are made up of a myriad of nationalities, where certain nationalities may need to be prohibited from having access to certain information due to security concerns.

EU nuclear diplomacy and Russia

Europe has spent most of 2022 trying to wean itself off Russian fossil fuels. However, its nuclear sector remains heavily dependent on Russia, importing more than €200 million worth of Russian uranium every year. Germany, Poland, and a handful of other EU countries want a total ban on Russian imports, but nuclear energy continues to be absent from sanctions packages to date.

Wider EU dependence on Russian uranium means a unanimous decision to ban Russian uranium remains off the cards. Only Niger and Kazakhstan are larger trade partners than Russia when it comes to uranium imports into the EU.

The dependency on Russian nuclear fuel is largest in Eastern and Central Europe, where 18 nuclear power plants were designed by Russia and rely on Russian technologies and services, as well as fuel elements provided by Rosatom (which remains unsanctioned, even as a Russian state-owned entity).

Hungary has gone as far as issuing a permit allowing the construction of two new nuclear reactors by Rosatom. The reactors are part of a 2014 deal between Moscow and Budapest aimed at expanding the existing Paks nuclear plant, Hungary's only operating nuclear power station.

A principal reason cited for the reluctance to cut ties with the Russian nuclear sector is that the issue is about the need to adapt, which can only be done on a long-term basis: technologies need to be adapted, engineers need to be re-trained, and sources of supply need to be diversified.

If sanctions on Russian uranium were to be integrated, then they would have to be coupled with very long implementation times for them to be acceptable to all member states. European decoupling from Russian uranium and Russian nuclear know-how will happen, but it will happen on a long-term and gradual basis.

For businesses operating in the nuclear industry, potential disputes can be difficult to manage and require extensive resources. Reed Smith's global team of projects and construction lawyers are very experienced in handling nuclear disputes and are ideally placed to assist.

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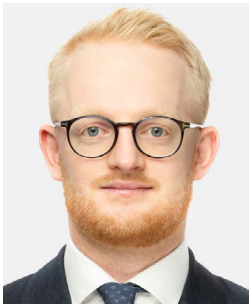

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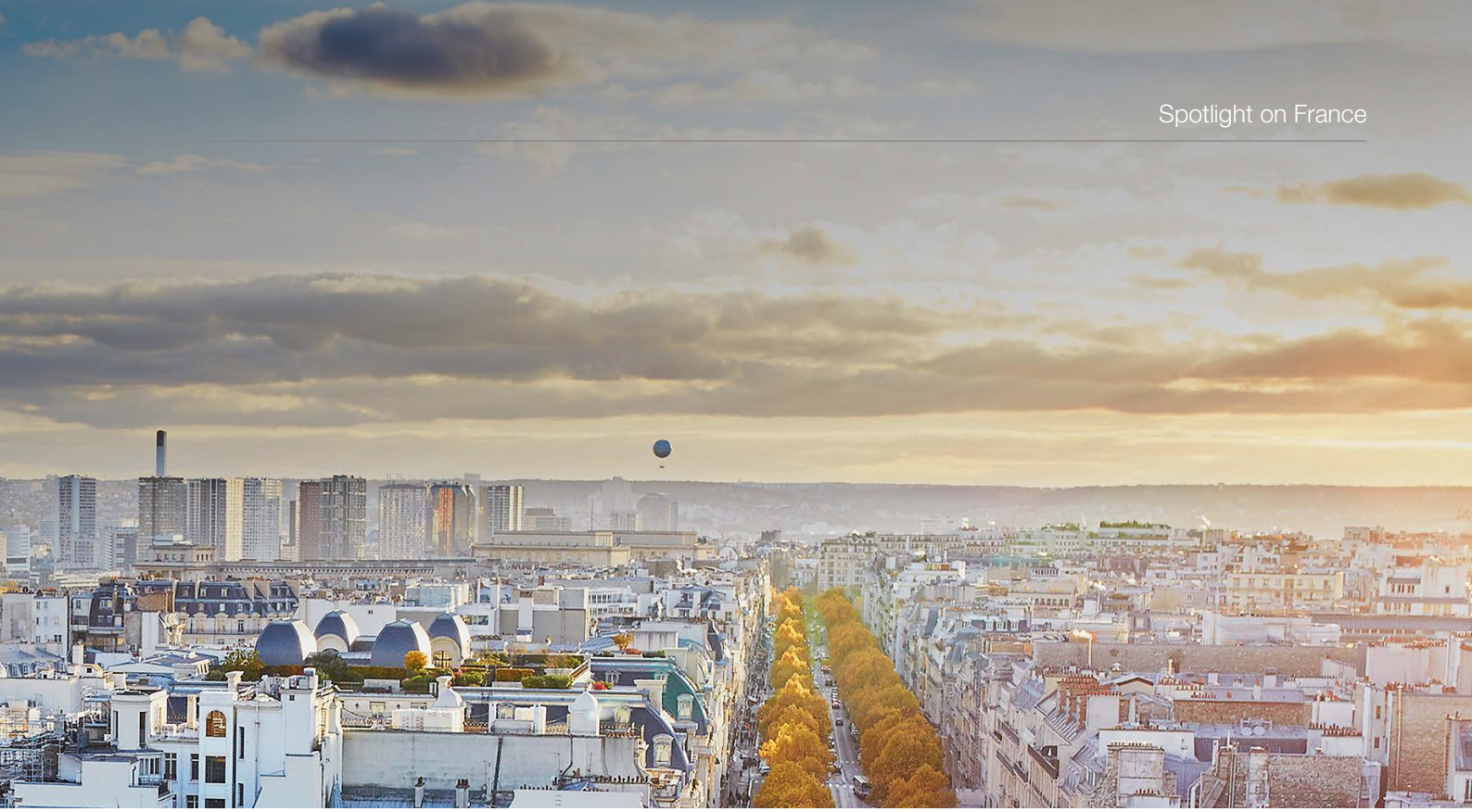
Spotlight on France

Europe has been through tumultuous times in recent years. Just as the continent was slowly emerging from the economic impact of COVID-19, the war in Ukraine commenced, all of this occurring amidst the ever-present climate crisis. These major global events have had a significant impact on the European construction industry and Europe's approach to energy infrastructure and energy security.

Although each European country finds itself in a unique position, this article focuses on the current situation in France and, specifically, its regulation of nuclear power.

With a vast nuclear fleet composed of 18 nuclear power plants containing 56 reactors of varying power levels,[1] nuclear power is the main source of energy production and consumption in France (accounting for three-quarters of French electricity production). This strong reliance on nuclear energy differentiates France from its European neighbors and the rest of the world. In light of the war with Ukraine, it also places France in an advantageous political and economic position, because France does not depend heavily on Russia for gas imports.[2]

The future of nuclear power in France has not always been so certain. There has been a degree of ambivalence towards nuclear energy since the Fukushima accident in Japan in 2011.[3] However, to address the climate crisis and energy shortages posed by the war in Ukraine, France has taken a number of significant steps that will impact the long-term future of energy in France, including nuclear energy.



Accelerating renewable energy

In early November 2022, the French Senate (half of the French Parliament) approved the Renewable Energy Bill with the objective of ensuring France's energy sovereignty.[4] The aim of the bill, which is due to be presented to the National Assembly (the other half of the French Parliament) in early December 2022, is threefold:

1. Reducing administrative procedures in order to reduce the time required to deploy new energy projects.
2. Accelerating the development of renewable energies, such as solar and offshore wind power.
3. Improving the local acceptability of energy projects.

The Renewable Energy Bill contains exceptions to the "Littoral Law"[5] (a law designed to protect the French coastline and limit construction). It allows the installation of photovoltaic panels, the production of renewable hydrogen, and the creation of the electricity transmission networks necessary for offshore wind turbines.

Two main amendments made by the Senate committees were rejected in the Senate Chamber:

1. A mayoral right to veto the installation of renewable energies in favor of a more global system based on the choice of "priority zones" by municipalities.
2. Priority for areas located a minimum distance of 40km from the coastline for offshore wind projects on the grounds that such a distance significantly reduces the development potential for offshore wind power.

The Renewable Energy Bill is intended to respond to two issues: (i) the climate crisis, which has forced France to seek alternative solutions to traditional energy consumption models; and (ii) the war in Ukraine, which – despite the more limited impact on France compared to other European states – requires France to limit its dependence on Russian gas in order to avoid an energy crisis on French territory.

Accelerating the construction of nuclear reactors

Another aim of the Renewable Energy Bill is to facilitate the development of nuclear energy in order to move away from fossil fuels and achieve carbon neutrality by 2050. The bill provides for the construction of six EPR2s (European Pressurised Reactors) and provides an option for the construction of eight others in the future. The bill simplifies administrative procedures by:

1. Providing for an exemption from town planning authorization for the installation of facilities near existing nuclear sites.
2. Authorizing work on buildings not intended to receive radioactive substances before the end of the public inquiry.
3. Setting aside the application of the aforementioned Littoral Law for the construction of new nuclear reactors by the sea if they are installed close to or within the perimeter of an existing nuclear plant.
4. Allowing expropriation measures, with immediate possession, for works ancillary to the nuclear reactor projects (pumping installations, electrical substations).

The three pairs of EPR2s are to be built by 2027 and commissioned in 2035 and 2037. The stated objective of the Renewable Energy Bill is to achieve energy independence while respecting climate objectives.

France's withdrawal from the Energy Charter Treaty

Following the example of Spain, the Netherlands, and Poland, French President Emmanuel Macron announced at the end of October that France will withdraw from the Energy Charter Treaty (ECT) to protect the investments of companies involved in fossil fuel activities. The decision to withdraw was taken under pressure from non-governmental organizations and the High Council for the Climate, which argued that the ECT is incompatible with the provisions of the Paris Agreement.

There are two consequences of France's withdrawal from the ECT. The first is that in accordance with Article 47-2 of the ECT, the withdrawal will be effective one year after its notification. France will remain bound by the provisions of the ECT until the end of 2023; however, investors after that date will not have access to the ECT's ISDS mechanism to protect their post-withdrawal investments. The second consequence is that by virtue of Article 47-3, the so-called "sunset" or "survival" clause, companies will be able to benefit from the provisions of the ECT[6] for a period of 20 years after the effective withdrawal, so France will remain subject to the ECT provisions until 2043.

Economic and Social Resilience Plan

The excessive increase in gas prices as a result of the war between Ukraine and Russia, as well as the tensions between Russia and Europe over the Nord Stream 2 pipeline, have justified several recent measures taken by the French government. For example, since April 2022, the ARENH mechanism – a mechanism exclusive to France that effectively opens up the electricity market by granting alternative suppliers to EDF access to nuclear production at a defined price of €42/MWh, with a total demand capped at 100 TWh per year – has been increased by 20 percent.

This has resulted in a volume of 120 TWh being made available to electricity suppliers for the year 2022 at a slightly increased price of €46.2/MWh. In addition, and in order to cope with the surge in energy prices, the TICFE (a domestic tax on the final consumption of electricity), which has been at the full rate of €22.5/MWh since 2016, has been reduced to the minimum rate authorized by European law, which is €0.5/MWh for all companies (€1/MWh for households and similar).

The (multibillion-euro) ITER Nuclear Fusion Program

The war in Ukraine has seen many international programs suspended or even canceled (e.g., ExoMars). However, despite the ongoing economic sanctions against Russia, the International Thermonuclear Experimental Reactor (ITER) project – construction of an experimental machine in the south of France aimed at mastering the production of energy from hydrogen fusion (potentially allowing the release of four times more energy than from fission used in nuclear plants) – has not been called into question. Russia, which is still involved in the project despite the tensions caused by the war in Ukraine, shipped to France on 1 November 2022 one of the six 200-tonne, nine-meter-wide magnets that will make up the top part of the world's largest "tokamak."[7] The delivery of this ring-shaped magnet – built under the supervision of Russia's Rosatom atomic agency – was supposed to take place in May, but sanctions forbidding Russian ships from docking in Europe delayed the departure.

Construction law: new obligations

At the end of July 2022, order no. 2022-1076 was published, which completes and strengthens the administrative control of compliance with construction rules. It amends several provisions of the Construction and Housing Code and imposes new obligations on builders from 1 January 2024. Bill no. 338 was submitted for ratification of the order in October 2022. The order creates an obligation for employers to provide certificates showing they have considered the various risks to which the construction is exposed.

These include a new certificate certifying compliance with "the rules for the prevention of risks related to clayey soils provided for in articles L. 132-4 to L. 132-9" when the land is located in an area identified as exposed to the phenomenon of differential ground movement resulting from drought and soil rehydration. The order also introduces preventive and coercive tools aimed at making administrative control more efficient (e.g., site visits, the possibility of suspending work, withdrawal of approval, etc.). Finally, the order strengthens measures and sanctions (both criminal and administrative) applicable in the event of a violation of construction rules. The general provisions of the Civil Code applicable to "special contracts" (some of which have remained unchanged since 1804), including provisions applicable to construction contracts, are also under review by a committee that has submitted a first draft that is open to public consultation until 18 November 2022.

1 These plants are exclusively owned and operated by the state-owned *Eléctricité de France* (EDF), which has a monopoly on both the production and supply of electricity. Currently, 32 reactors are shut down, notably due to maintenance and stress corrosion problems.
2 Although Russia supplied around 40 percent of the gas consumed in Europe in 2021, Russian gas imports represented only 17 percent of the gas consumed in France in February 2022. It is therefore not the main source of supply, unlike some states that are 100 percent dependent on Russian gas, such as Slovakia, Latvia, Estonia, and the Czech Republic, or 55 percent dependent, which was the case for Germany in early 2022.
3 The administration of President François Hollande passed a law after the Fukushima accident to reduce nuclear-generated electricity to 50 percent in the whole in France by 2025, although industry was not compelled to carry out the reductions.
4 "*Projet de loi relatif à l'accélération de la production d'énergies renouvelables*" (Bill on the acceleration of renewable energy production), submitted on 26 September 2022 (the Renewable Energy Bill).
5 Littoral: meaning "Costal."
6 Article 47-3 provides that following a member state's withdrawal, the provisions of the treaty shall continue to apply to investments made in the area of that member state by investors of other member states, or in the area of other member states by investors of that member state, for a period of 20 years.
7 A machine that uses powerful magnets to confine plasma in a donut-shaped "torus."

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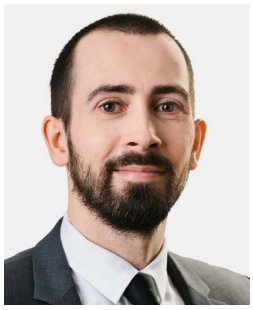

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Using the NEC form of contract on UK nuclear projects

The UK nuclear renaissance creates huge opportunities for contractors. The UK government's Energy Security Strategy, unveiled in 2022, plans to increase nuclear power generation to 24GW by 2050 – three times more than is currently produced.[1]

The UK government anticipates building up to eight more reactors across the next series of new build projects, and this will present huge potential rewards (and risks) for the nuclear supply chain.

A key aspect of exploiting those opportunities and minimizing risk for contractors will be to understand how best to negotiate the standard form contract that is most frequently used on UK construction projects – the NEC form of contract.

The NEC is used on UK nuclear projects but is unfamiliar to many international contractors

Most major nuclear projects in the UK are let under the NEC suite of contracts, both in the nuclear decommissioning sector and on current and planned nuclear new build projects.

The NEC suite is widely used in the UK, South Africa, and Hong Kong, and in a much more limited way in several other countries, such as Australia, Ireland, and New Zealand.

The limited use of the NEC suite outside of those few jurisdictions means that many international contractors hoping to work on nuclear projects in the UK have little or no experience of the NEC.

Further, to the extent that contractors have used the NEC form, it has often been in relation to the pre-2017 NEC3 suite rather than the newer NEC4 suite launched in 2017. Although NEC4 is very similar to NEC3, there are differences.

Moreover, many construction professionals and lawyers have no experience with the NEC in a specifically nuclear context. One of the main reasons that the NEC is used for nuclear contracts in the UK is not because it has been drafted for that particular type of project but rather because it is the preferred contract of the UK government. As such, it has been used on a wide mix of projects, including the stadia for the London 2012 Olympics, the HS2 high-speed railway, Terminal 5 at Heathrow airport, the Thames Tideway "super sewer," highway projects, and on construction contracts for the UK National Health Service. The demands of those types of projects often differ from the particular demands presented by a nuclear project.

The specific challenges of the structure and drafting of the NEC

Using an NEC contract for the first time can be disconcerting and disorientating because the structure and language differ significantly from other standard form construction contracts (such as FIDIC).

In terms of structure, an NEC contract is built up by bolting together the following components:

- Core Clauses that form the heart of every NEC contract and set out fundamental obligations with regard to such things as the contractor's main responsibilities, the time for completion, payment, and so on. Most NEC4 contracts have nine core clauses.
- So-called "Main Option" clauses that users select to reflect the chosen procurement route to be used on the project. By way of example, Main Option A is a priced contract with an activity schedule where the risk of carrying out the work at the agreed prices is largely borne by the contractor, whereas Main Option E is a cost-reimbursable contract in which the contractor is reimbursed the actual cost they incur in carrying out the works, plus an additional fee, where the risk involved is largely taken by the client.
- Secondary option clauses, known as X-clauses, that may be used to deal with common issues, such as the provision of bonds, price inflation, limitations of liability, and so on.
- So-called Y-clauses that deal with payment issues, which are particularly important in the UK because of statutory payment obligations that apply in respect of certain construction contracts.
- Additional conditions of contract known as Z-clauses, which are bespoke terms or amendments to the contract.

The Z-clauses, in particular, must be handled with care. The interface of standard form clauses and bespoke amendments can be problematic, and it is not unusual to see Z-clauses that attempt (sometimes with unsatisfactory and unintended consequences) to make significant changes to the obligations that otherwise apply. There is therefore a risk that the contract can become a dangerous Frankenstein's monster of motley components unless Z-clauses are kept to a minimum or drafted with great care to dovetail with the other contractual obligations.

In terms of language, the drafting of the NEC is sometimes lauded on the basis that it uses short sentences, breaks clauses down using bullet points, is drafted in the present tense, and attempts to avoid cross-references.

Although such attempts at "plain English" are on the face of things laudable, in fact, problems in the drafting of NEC have attracted criticism from distinguished English judges:

- In *Anglian Water Services v. Laing O'Rourke Utilities* (2010), Edwards-Stuart J said "No doubt this approach to drafting has its adherents within the industry but … from the point of view of the lawyer, it seems to me to represent a triumph of form over substance."[2]
- In *Atkins Ltd v. Secretary of State for Transport*, Akenhead J said that some people "criticise these Conditions for some loose language, which is mostly in the present tense, which can give rise to confusion as to whether and to what extent actual obligations and liabilities actually arise."[3]

It is perhaps reflective of these issues nature of the NEC that use of the suite outside a limited number of jurisdictions has not spread organically by word-of-mouth recommendation and adoption.

The relative lack of clarifying case law for the NEC

In contrast to other commonly used standard form construction contracts, there are relatively few reported cases dealing with the NEC. This means there is a lack of precedent to provide an accepted interpretation of ambiguous drafting in the NEC.

In *Atkins*, Akenhead J noted that a key problem with the NEC form is that "very few cases involving material disputes as to the interpretation of the NEC3 Conditions have made their way through to reported court decisions."[4]

This differs from, say, the JCT form of contract, which has been a commonly used contract in England for almost one hundred years and has therefore amassed a significant body of binding precedent in the specialist English construction court and at the appellate level.

Similarly, many aspects of the FIDIC suite have been discussed either in the courts of England or other related jurisdictions (such as Hong Kong, Singapore, and various Australian jurisdictions) or have been the subject of ICC awards and related practitioner commentary.

The relative paucity of binding precedent or persuasive authority with respect to various NEC clauses means that it can sometimes be difficult to advise with certainty as to how a particular clause in the NEC is intended to operate or how it will be treated by a third-party dispute resolver.

Understandably, parties to contracts and those who fund projects generally prefer certainty and do not like contracts where the meaning of contractual terms is unclear and can only be resolved by reference to a third-party dispute resolver.

Issues with the drafting of the NEC become particularly problematic if the parties fall into dispute. That is because the underlying philosophy of the NEC is that the parties should work collaboratively, and the NEC is therefore not well adapted to a situation where the relationship is antagonistic and the employer intends to frustrate the speedy resolution of claims.

Some of the problems with the NEC are demonstrated in microcosm by the way in which the NEC3 deals with collaboration. Core Clause 10.1 of NEC3 says "The Employer, the Contractor, the Project Manager and the Supervisor shall act as stated in this contract and **in the spirit of mutual trust and co-operation**" (emphasis added). Although the language is superficially simple and straightforward ("spirit of mutual trust and co-operation"), there is no explanation of what that actually means in practice and how it relates to the other duties set out in the contract.

An NEC contract cannot be "left in a drawer" after signing

Sound project management principles dictate that any construction contract should be administered in line with its terms. It follows that any type of standard form construction contract cannot simply be filed away after signing.

However, a proactive project management approach is all the more important with respect to the NEC because it places a higher administrative burden on the contractor than many other standard form contracts.

This is because the NEC aims to identify and resolve risks at an early stage, and it obliges the contractor to flag risks by providing "early warnings" and updating a risk register. The NEC also sets out detailed requirements for what must be shown in the project program, which must be updated regularly.

Importantly, the contractor is required to state the time and cost impact of a compensation event within a defined time period; otherwise, the contractor risks losing its entitlement to extra time and money.

This is particularly important in an English context because a tribunal applying English law will generally give effect to a time bar provision that is expressed as a condition precedent, even if that prevents a party from presenting an otherwise valid claim.

It follows that if the contractor is not on top of the contractual project management requirements, then depending on any bespoke amendments and the particular factual context, it may be difficult to recover additional time and cost.

It is therefore sensible to train the project team on the importance of the mechanisms in the NEC before the project starts and to put in place systems to ensure that those mechanisms are followed.

The NEC contract was not created specifically for nuclear projects

The NEC form is not a contract that has been specifically designed with the construction of a nuclear plant in mind.

The testing and commissioning obligations in the NEC are dealt with less extensively than, for example, a FIDIC Silver Book or IChemE Red Book, and the NEC therefore often requires considerable amendment in that regard.

Further, intellectual property concerns are a key feature of nuclear power projects. However, the intellectual property provisions in the NEC are lightweight and ambiguous, and the parties will almost inevitably seek to bolster or replace them with extensive amendments.

In the nuclear context, there is obviously a large amount of stringent nuclear-specific regulation, and reflecting those requirements in any standard form contract is not easy.

Careful thought should be given to how to mesh amendments into the existing contract. It is vital that any Z-clauses are compatible with any unamended drafting, and particular care should be taken to ensure, for example, that inapposite clauses from other standard forms are not dropped thoughtlessly into the contract.

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1 "British Energy Security Strategy," *UK Government*, April 2022, page 21.
2 *Anglian Water Services v. Laing O'Rourke Utilities* [2010] EWHC 1529 (TCC), paragraph 28.
3 *Atkins Ltd v. Secretary of State for Transport* [2013] EWHC 139 (TCC), paragraph 9.
4 Ibid.

Q&A with Liam Hart – Energy & Natural Resources lawyer, London

Introduction to the lawyer's practice

What types of disputes are you handling at the moment?

A mixture of construction and engineering disputes, often with a renewables or nuclear flavor. I focus primarily on international arbitration, as well as and litigation in the specialist Technology and Construction Court in London, but also work a lot in construction adjudication, dispute boards, expert determination, and various other forms of dispute resolution under the standard form construction contracts.

What is the "sweet spot" in your international construction practice?

Over the years, I have been lucky enough to work on several high-profile and technically complex projects. An example was an arbitration where I worked for a Franco-German contractor building a delayed nuclear power plant in Finland. At the time, that was probably one of the highest value and most complex construction arbitrations in the world. I find the challenge of complex disputes intellectually satisfying, and I enjoy working with people from different cultural backgrounds.

Are you involved in any cross-border disputes?

Yes. I am working on several cross-border disputes – for example, an onshore wind farm project in the American Midwest under the AAA rules and a nuclear power project in Africa under the ICC rules. A large part of my work involves working for international clients or deals with major projects outside of the UK.

Construction law/disputes-related questions

What are your clients most concerned about as we turn the corner to 2023 (i.e., what is keeping them up at night)?

During the COVID-19 period, a lot of disputes were put on hold as people were focused on just getting through the immediate period. It was such an unprecedented challenge that the focus was very much on week-to-week issues. We are now seeing disputes coming out of the deep freeze. Internationally, and within the UK, we are also seeing an increase in the number of disputes related to renewables projects because of the increased number of those types of projects. Within the UK, we are seeing a lot of fire-safety-related defects cases following new legislation introduced after the Grenfell Tower fire in London in June 2017. The effects of inflation in the cost of materials continues to be a huge issue. Of course, we continue to see all the usual matters that have probably affected construction projects since the Pyramids were built, such as defects, liability for ground conditions, arguments around the causes of delay and disruption, and so on.

Is arbitration still the most popular form of dispute resolution for your construction clients, and are you seeing any appetite for adjudication or other fast-track dispute procedures, such as expert determination?

Arbitration is still very much the preferred forum for clients working outside of the UK. The dynamic within the UK is slightly different because we have a specialist construction court (the Technology and Construction Court). Adjudication is a big part of the construction industry in the UK, and that experience is an advantage when working on projects outside of the UK using standard form contracts with similar dispute resolution mechanisms.

Nuclear issues

What kinds of dispute issues do you see arising on nuclear power plant projects?

A common feature of nuclear disputes is the sheer scale and complexity. A nuclear power plant is one of the most sophisticated things that can be built. For example, the Instrumentation and Controls systems are often incredibly complex. So sometimes, these nuclear disputes are like a typical construction dispute but on steroids. Another factor with nuclear projects is that there are always specific statutory regimes in place, which means that regulatory approval of designs or drawings can become a bottleneck. It is also often the case that these projects attract a lot of government and media attention, so they can be quite high profile, and helping to manage that aspect can be interesting.

What role does the contract play in causing disputes?

Ambiguously drafted contracts can sometimes lead to disputes. It is important to have certainty, including in the dispute resolution provisions.

How important is dispute avoidance for nuclear power projects, and how can clients get better at this?

In the UK and certain other jurisdictions, nuclear contracts are based on the NEC standard form, which requires early warnings and stresses mutual cooperation. Avoiding disputes depends of course on the attitudes of the parties, but certainly NEC actively promotes mutual cooperation. Regardless of the contract, it is ultimately the parties' relationship that determines whether a dispute can be resolved amicably or whether formal dispute proceedings are necessary.

Do you anticipate more disputes in the area of nuclear power plants, and if so, where will those disputes be based?

We want to avoid disputes as far as possible as an industry. However, we have seen something of a renaissance in new-build nuclear projects in many countries (such as the UK and France) due to the volatility in the oil and gas markets, the desire to ensure energy security, and the move to a carbon-neutral future. We are also seeing an increasing number of countries, like Egypt and Bangladesh, building nuclear power plants for the first time. Simply because of the increased number of projects internationally, there are likely to be more disputes, despite everyone's efforts to avoid them.

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Have a question?

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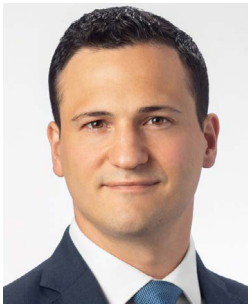

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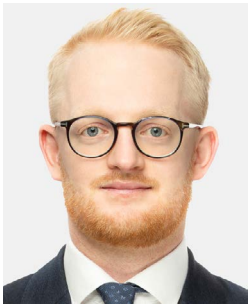

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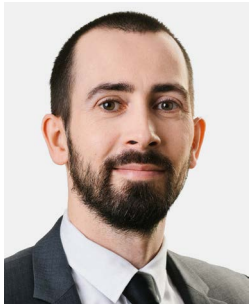

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