HERBERT SMITH FREEHILLS

THE EMERGING HYDROGEN ECONOMY: ANTICIPATING AND RESOLVING DISPUTES

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Legal Briefings – By **Guillermo Garcia-Perrote, Michael Lake and Jesse Tizard**

Decarbonisation and energy transition pose a major industrial and commercial challenge of our time. The emerging hydrogen economy is a good illustration of this.

In this post, we explore what the changes to the commercial and regulatory landscape over the coming decades may mean for managing commercial relationships, and anticipating and resolving disputes.

BACKGROUND

For a time, the theoretical possibilities of hydrogen did not match the commercial reality. Now, with backing from governments and keen interest from industry and investors, there is a growing acceptance that clean hydrogen may move from being a nascent industry to one which is a core part of the energy transition.

As hydrogen's potential is realised and embraced, new and existing infrastructure projects will emerge. New projects will rely on new technologies, fresh sources of investment, unchartered and developing regulatory landscapes and collaboration involving the public and private sectors, and both current energy players and new ones.

There are significant challenges and risks associated with the transition to clean energy, and hydrogen is no exception. Those risks will need to be anticipated and carefully allocated and managed.

Disputes familiar to those involved in energy and construction, such as those associated with the design and construction of hydrogen infrastructure projects will remain inevitable, but disputes will also likely emerge from areas not so familiar.

WHY CLEAN HYDROGEN MAY BE A GAME CHANGER

HYDROGEN AS FUEL – AN OLD IDEA WITH FRESH POTENTIAL

The enthusiasm for hydrogen is not new. Since it was discovered as a distinct element in the late 1700s, and first converted into an electrical fuel cell in the early 1800s, waves of interest in harnessing hydrogen as an alternative fuel source have come and gone.

Today's momentum seems more promising than before. This is down to a confluence of technological progress (including ongoing R&D), unprecedented commitments and policy development from governments around the world, uptake from industry, and pressure to find sustainable energy solutions.

CLEAN HYDROGEN

In many places, like New South Wales, there is a focus on “green hydrogen”. Green hydrogen is seen as an important part of the overall energy transition and is an area of visible policy development, as it provides a viable decarbonisation option for hard-to-abate sectors, such as steel production, chemical manufacturing, long distance transport, shipping and aviation.

Clean or “green” hydrogen will be produced in parts of the world that have an abundance of wind and solar energy, and exported to those parts of the world that do not. For Australia, the choice is obvious. Unsurprisingly, there is strong policy focus on the supply side of the equation, in anticipation of demand from overseas.

RECENT POLICY DEVELOPMENTS

Several governments across the world have announced and are implementing hydrogen strategies to encourage investment and scaling up of hydrogen capability.

New South Wales provides a useful example. The NSW hydrogen strategy aims to make NSW a “global hydrogen superpower”. At its core, the strategy seeks to accelerate the development of a commercial hydrogen industry in NSW. The strategy identifies an AUD 3 billion commitment to support this, including by providing subsidies on production, investment in hydrogen hubs in the Hunter and Illawarra regions of NSW, incentivising green hydrogen production and rolling out refuelling stations.

The strategy identifies several targets, including that by 2030:

- hydrogen is less than AUD 2.80 per kilogram (down from over AUD 8 per kilogram);
- NSW produces 110,000 tonnes per annum of hydrogen; and

- NSW has 10,000 hydrogen vehicles on the road, and has hydrogen powering 20% of the heavy vehicle fleet.

The Federal Government is also investing in hydrogen, announcing an overall investment of AUD 1.2 billion into hydrogen related initiatives and project backing. The Government's flagship pilot program is the Hydrogen Energy Supply Chain Pilot Project with Japan, led by AGL and backed by commitments from the Australian state and federal Governments, and the Japanese Government.

Following years of investment, the project reached a significant milestone on 21 January 2022 when the Suiso Frontier, a specially built ship described as an "engineering marvel", arrived at Port of Hastings in Melbourne. In what was the world's first intercontinental shipment of liquid hydrogen, the Suiso Frontier made its first delivery to Kobe, Japan, in February 2022.

In an effort to attract overseas investment into hydrogen supply chains, Australia is pursuing a number of other state-level partnerships: for example, an AUD 50 million investment into the German-Australian Hydrogen and Technology Incubator, HyGATE, which proposes to connect Germany's expertise in hydrogen technology with Australia's natural resources.

FLASHPOINTS FOR DISPUTES

The infrastructure needed to support the hydrogen economy will be significant both in terms of size and complexity. Specialist infrastructure such as production plants, pipelines and storage facilities will need to be designed and constructed (or repurposed). Similarly, infrastructure to support the transportation of hydrogen will be necessary.

The projects required to implement this infrastructure will indeed be complex and high value, as will the disputes they inevitably create. We identify below some possible flashpoints for disputes on these projects.

NEW TECHNOLOGIES

Hydrogen projects will require parties to adopt and implement new and emerging technologies. Some of the technologies will be untested.

There is an inherent risk that technologies do not perform as intended during construction or operation of the project. As with defects, where this occurs, it is common for disagreement as to who is responsible for the consequences, including where this leads to project delay and cost, or downstream commercial impacts. This is an area highly likely to lead to disputes. There is similar risk of disputes arising in relation to standards relating to the hydrogen industry, as they are new or developing.

MULTI-PARTY ARRANGEMENTS

The current incentive structure for the development of "hydrogen hubs" gives express preference to multiple project partners, underscoring the likelihood that project arrangements in the hydrogen sector will involve the added complexity of multiple players. The preference is of course driven by the recognition that this industry itself is new, and collaboration between players with different expertise is necessary to deliver on the stated targets.

Although there are similarities with the LNG market, hydrogen production is dominated by multi-party joint ventures. Where projects do not go to plan, misalignment between stakeholders will provide further, fertile ground for disputes.

A complex contractual matrix will likely be a feature of many hydrogen projects.

For some projects, there will likely remain an EPC or similar contract between the owner and main contractor. That main contractor, which may be a joint venture or similar, will, as far as possible, pass its obligations “downstream” to its sub-contractors. At the early stages of the hydrogen economy, there is likely to be a tendency toward contractors being allocated key project risks, although presumably that will come at a cost. There will be separate but connected contract arrangements in relation to equity and finance , and offtake arrangements.

While disputes will emerge at different points within the matrix, disputes between owners and contractors will likely be predominant. Those disputes will emerge from the same key issues affecting other projects: delay to the progress of the works, cost overruns and defects.

DEVELOPING REGULATORY ENVIRONMENT

New hydrogen projects will face a complex regulatory landscape. Generally speaking, current regulations cover the existing production and use of hydrogen for industrial applications. However, the big question is whether the current regime is capable of effectively accommodating the hydrogen economy envisaged by government and industry.

Legislation relating to the production, transport, use, safety and environmental impacts of hydrogen is a key concern. In order to promote consistency between states, and alignment with international best practice, a separate review is needed to consider what bespoke regulatory or legislative changes may be required.

A range of further reforms are possible, including the creation of demand side incentives (as have been seen with solar power and electric vehicles for example), amendments to the gas market legislation, and revisions to the incentive schemes to encourage generation of electricity from renewable sources..

Possible regulatory issues arising from hydrogen projects risk causing disruption to projects and disputes. This has been the experience in Australia with issues associated with delay to grid connection giving rise to significant disputes between project parties.

Thinking globally, investment treaty arbitration will likely be in the spotlight. The recent RWE and Uniper's claims against the Netherlands under the Energy Charter Treaty (ECT) relating to the state's decision to phase out coal are a good example, and there will likely continue to be developments in the investment treaty space.

AVOIDING AND RESOLVING DISPUTES

While the emergence of a hydrogen economy holds great promise, the commercial and industrial risks and challenges will drive issues and disputes which will need to be managed and resolved.

Navigating those risks will require particular care, and those involved in hydrogen projects should consider in particular:

- appropriate allocation of risk in the contractual arrangements relevant to the project and parties in question;
- proactive contract administration and management during project delivery, particularly during design and construction in an effort to avoid disputes from arising; and
- crafting, at the outset, an appropriate dispute resolution mechanism to resolve disputes which cannot be avoided. Depending on the project, there may be advantage in selecting an appropriate "escalating" dispute resolution clause. There may similarly be advantage in selecting procedures allowing disputes to be resolved as quickly and efficiently as possible – and, for certain disputes, at an early stage so they are not left to snowball into bigger disputes, hindering project delivery.

Arbitration will be ideally suited to some project disputes, particularly those involving investors, contractors and other parties in different jurisdictions. Arbitration in this context provides the benefit of ease of enforcement by way of the New York Convention and the parties being able to select arbitrator/s appropriate for the dispute at hand.

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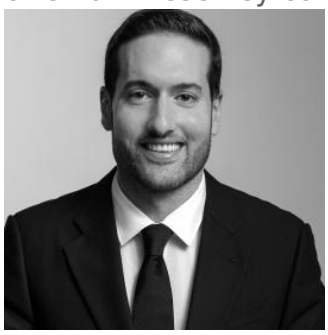

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