Green hydrogen contracting – land acquisition and use

Part one: International Best Practices in Respect of Fiscal Terms and Incentives

1. Introduction and context setting

Many early green hydrogen projects around the world have been relatively small in scale, funded from the sponsors' own balance sheets and implemented on land already owned by one of the sponsors. Generally, these projects have been concentrated in countries with mature legal and land rights systems. The rapid deployment and scalability of green hydrogen has opened the door to the development of large-scale green hydrogen projects, a number of which are likely to be located in jurisdictions where there is a less well-developed legal framework for land use rights of the type required to facilitate the assessment, appraisal, development, operation and/or financing of major green hydrogen energy projects.

If the green hydrogen economy is to realise its full potential, it is vital for stakeholders to carefully consider land acquisition and use issues. This includes using lessons that have already been learnt from the extractive and renewable energy industries. The economic costs of not doing so are high – for instance, it has been estimated that in the mining and extractive sectors, as a result of land use conflict, a major, world-class project suffered roughly US$20 million per week of delayed production loss in net present value terms.[1] In addition to economic losses, land use conflicts may also bring significant reputational damage, as well as litigation and liability risk, as a result of heightened awareness and scrutiny of environmental, social and governance-related matters.

This preliminary set of guidance from the initiative on *Green Hydrogen Contracting – for People and Planet* is aimed to support governments, communities and companies. It is under development and is currently being shared with stakeholders for consultation. The guidance has been developed by a working group consisting of governments, law firms, companies and civil society groups. For further information about the initiative and to access the set of guidance on green hydrogen contracting, visit gh2.org/green-hydrogen-contracting**.** GH2 welcomes comments and feedback on the guidance to be sent to Ines Marques (ines.marques@gh2.org).

[1] https://www.pnas.org/doi/pdf/10.1073/pnas.1405135111

This brief provides an overview of some of the key issues that stakeholders will need to consider when determining how green hydrogen projects should structure land acquisition and use, together with a review of some early themes and good practices that are emerging in this nascent industry.

One of the challenges of a "one size fits all" guidance to land use is the sheer diversity of green hydrogen projects. At one end of the spectrum might be the relatively straightforward addition of an electrolyser to an existing source of renewable electricity in order to displace existing "grey hydrogen" demand at a specific site. At the other end is a much more complex multi-phase project on a remote greenfield site involving the construction and development of a renewable electricity generation project across large tracts of land in addition to newbuild infrastructure for the production, storage, transportation, export shipping and conversion of hydrogen and ancillary feedstocks/inputs, utilities, services and logistics for both the construction and operational periods of the project.

This brief aims to provide pointers that will be of greater or lesser relevance to many green hydrogen projects, regardless of technology and jurisdiction. As the market is currently in its earliest stage the guidance presented will be further refined in consultation with stakeholders over time.
For the purposes of this note we have presumed that the host country will be responsible for granting land rights to the relevant project. In some jurisdictions it may be that land rights are to be negotiated directly by sponsors with private landowners, perhaps supported by legal powers granted to sponsors to acquire land in circumstances where negotiations are unsuccessful. However, such approaches are outside the scope of this note.

a) Relevant practices and international trends

a) Understanding the legal/regulatory regime

The first step in a project's consideration of land use issues is to understand the nature of the legal and regulatory regime surrounding land acquisition and use in the host country. What laws govern the acquisition, clearing, change in use and/or development of land, and which governmental agencies have the authority to issue any required authorisations? Some host governments may also require approval from additional government agencies that are not usually involved in land contracting to the extent that the green hydrogen

project is classified as a project of national/strategic interest (or similar). Outside of approvals for the construction of the core hydrogen facility, additional approvals may also be required in respect of secondary activities required for the project to be viable, such as the storage, transportation and distribution of hydrogen, the sourcing and supply of water, access to other utilities or to electricity transmission or distribution infrastructure or the development of roads, ports or airports to support the construction and/or operation of the project. If the Project will involve the use of sub-surface caverns, additional laws/regulations from the extractive mining industries may apply to the development of sub-surface rights.
The grant of a land concession by a host state will typically either be done on a tender/procurement-basis or on the basis of a standalone private agreement between the host country and sponsors. In each case, private sponsors and their financiers will want to make sure that the award of their contract, and all other aspects of the procurement of the relevant land rights, has been done in accordance with all applicable laws and other procedures and policies (including in respect of anti-bribery and corruption).

It will also be important for stakeholders to determine what environmental regulation the project will be subject to. This will depend upon the specifics of each project, but in many cases an environmental impact assessment will be required and environmental permitting regimes can be complex. Transboundary and cumulative impacts may also require consideration. Projects seeking external financing from export credit agencies, multilateral institutions and certain commercial lenders may need to upgrade impact assessments carried out under local laws to reflect the requirements of international standards such as the IFC Performance Standards and World Bank Group EHS Guidelines (applied through the Equator Principles and OECD Recommendations) as well as individual financier policy requirements. This will also typically require the extension of impact assessments to address social considerations, and specific climate change and human rights risk assessments may also be required. Impacts that may attract particular attention in the context of land acquisition and development for a green hydrogen project include biodiversity loss, resettlement and community impacts such as adverse impacts on livelihoods (including through loss of ecosystem services). Where indigenous peoples are present, additional requirements will apply.

b) Land tenure risks

i. <u>Identifying land rights</u>

Land tenure risks are the risks associated with acquiring rights to land in jurisdictions where land governance is less well developed, land rights are undocumented, or where there may be pre-existing claims to land which are difficult for project sponsors to diligence. The risk of a potential future dispute between investors and local communities over land or natural resource claims is common to many emerging markets and is a crucial risk for green hydrogen projects to navigate. Failing to account for these risks can create significant financial, operational, legal, and reputational risks for project sponsors.

Land rights can be seen as falling under two broad categories: (1) land rights that are formally defined according to law (such as constitutions, national laws, and regulations) and officially documented in land use registries (and can therefore be verified through conducting appropriate due diligence) and (2) informal or "customary" rights that are socially recognized and applied, but which may or may not be formally recognized by the law or documented.

The existence of formal land rights will inevitably be the subject of detailed due diligence carried out by sponsors at relevant land use registries. However, the presence of informal or "customary" rights represents a greater risk to international sponsors. Many jurisdictions allow local communities to hold "customary" rights to land, and in certain jurisdictions a significant percentage of land rights can be held in this way.

Additionally, in many jurisdictions land rights can be held on multiple and overlapping levels – for instance, the government may legally own land that has been used for generations by local communities based on customary rights. Private landowners may similarly own legal title to land to which pastoral communities have customary access. This increases the risk of land tenure conflicts and requires sponsors to perform a much greater scrutiny of the various overlapping claims to land rights.

ii. Land acquisition and compensation

As above, the site chosen for the development of energy projects, including green hydrogen projects, will sometimes inevitably overlap with land that belongs to, or is enjoyed by, private actors. It is almost universally recognised that governments have the right to compulsorily acquire property in the public interest subject to the payment of adequate compensation – this principle is enshrined, for instance, in the African Charter on Human and Peoples' Rights (1981), the European Convention on Human Rights (1952) and the American Convention of Human Rights (1969).

When determining the level of compensation to be provided to displaced communities, host country governments will need to find a balance between the compensation being adequate (in accordance with national and international best practices) and between the overall economics of the green hydrogen project. Project sponsors will, in their turn, have an interest in ensuring that the acquisition and compensation process has been transparent and fair with a view towards preventing future challenges to their legal title over the acquired land, in part because export credit agencies and certain commercial lenders will wish to ensure that resettlement processes have been undertaken (and compensated) to international standards, and appropriate livelihood restoration programmes (if relevant) implemented. Where indigenous peoples are involved, additional requirements will apply (see below).

iii. Land rights disputes

Given the nature of historic land rights, one of the first steps in the structuring of an energy project (including a green hydrogen project) should be a detailed due diligence of any historic land disputes which the project may inherit despite itself having adhered to all international best practices.

Before the development of the project gets under way, it is also crucial for project sponsors to work with communities and governments to create appropriate grievance or dispute resolution processes to address land disputes arising from the project over time.

b) Guidance on best practice

Given the nascent nature of the green hydrogen industry and the fact that the first set of greenfield projects is only now starting to be under way, we are not yet at a point where a best practice has emerged in relation to each of the topics highlighted in this note. However, a number of pointers may be taken from international standards and guidance provided by international organisations in other industries.

International best practice around concerns as to land tenure has typically focussed on three broad considerations: certainty, transparency and fairness. Certainty involves stakeholders knowing who has tenure over the land in question, and that the land tenure granted by host governments to projects will be enforceable against third parties. Transparency around the award of the land tenure ensures that national and international best practices are followed when awarding contracts to project sponsors and that these do not risk challenge from local communities or other private participants. Finally, the consideration of fairness provides for benefits from the project to be shared in an equitable

way between host governments, local communities and project sponsors. It is of course impossible to entirely separate one from the other – for instance, a system that is not transparent will not be fair, and a system that is not fair may subsequently be challenged in court and therefore be uncertain.

Export credit agencies, multilateral institutions and certain commercial lenders will apply international environmental and social standards such as the IFC Performance Standards and World Bank Group EHS Guidelines (applied through the Equator Principles and OECD Recommendations) as well as individual financier policy requirements. These govern all aspects and stages of the development, construction, operation and decommissioning of any project to which they apply. They are flexible in nature and expert support is typically required to ensure they are implemented in accordance with financier expectations. In the context of land tenure in particular, they set expectations in relation to the mitigation of environmental impacts, biodiversity risk management, stakeholder engagement (including with indigenous peoples where more stringent requirements apply – see below), community relations, resettlement and livelihood restoration, amongst other things.

In light of the above, project sponsors who are looking to develop green hydrogen projects have a strong incentive to:

a) **conduct comprehensive due diligence.** This has several aims, including to:

   c) understand the legal and regulatory regime applicable to the site, including the obtaining of permits (including planning and environmental permits) and any procurement process that must be complied with;

   d) identify, understand, and recognize all legitimate formal land rights based on a comprehensive review of national and federal land registries;

   e) identify pre-existing legal disputes that may affect the site;

   f) identify any competing future development plans for the proposed land by government bodies or other stakeholders; and

   g) conduct an environmental and social impact assessment to international standards; and

b) **engage with governments and local communities** (and in particular indigenous communities) from the outset, and on an ongoing basis with a view to:

(i) educate all relevant stakeholders in relation to the proposed project as early as possible (e.g., in the design phase). This would also give the project the opportunity to invite objections from stakeholders and to understand all tenure claims to the specified land so as to accurately determine legitimate land rights, especially where those rights are undocumented or customary;

(ii) engage with local companies or community leaders who are trusted by the community to represent their best interests in negotiations;

(iii) determine whether the appropriate level of engagement had been conducted, and appropriate degree of consent has been obtained from all stakeholders who have been identified as having legitimate land rights; and

(iv) establish an ongoing relationship with community stakeholders through the life of the project so that any future disputes can in the first instance be addressed in a constructive and collaborative manner.

d) Key objectives and guiding principles for decision makers

a) Documentation of land use concession

Several early-stage green hydrogen projects will be the subject of a memorandum of understanding (MoU), framework agreement. Cooperation agreement or similar arrangement between the project sponsor and the host country. The MoU may cover the investigation, appraisal, development and operation of hydrogen opportunities either at a site-specific level or a country-wide level. Stakeholders will need to consider whether the MoU should be a legally binding document (and if so, the appropriate dispute resolution procedure if it were to be challenged) and the level of detail and commitment that the MoU should contain regarding individual projects.

When it comes to documenting individual projects' land rights, stakeholders will need to consider whether the land-use concession should be structured as a lease, licence or other local format.

i. <u>Duration of tenure</u>

The duration of the land-use concession will clearly be an important topic to consider. For certain projects, it may be appropriate a phased approach such as:

1. an initial investigative/exploratory phase during which preliminary analysis is undertaken, potentially over large geographic areas, in order to identify those specific areas (if any) where project sponsors wish to develop a project;
2. an appraisal phase during which detailed analysis and project development work is undertaken in the lead up to a final investment decision; and
3. an implementation phase following a final investment decision during which project development and operational activities take place.

The duration of each phase (including any extension rights), the activities that may be undertaken, the obligations to be discharged, the ownership and transparency of site information developed during the term, the conditions to be satisfied in order to move from one phase to the next, the circumstances in which the concession may be suspended or terminated prior to its expiry (including due to force majeure and/or breach) and site restoration obligations at the end of the term will all be important considerations in ensuring an appropriate balance between the legitimate interests of (a) the host country in maximising the opportunities inherent in the state's natural resources and protecting the interests of local communities and (b) investors in realising a return on their investment commensurate with the level of risk to which that investment is exposed.

Payment obligations and exclusivity entitlements (both contemplated below) will also be key matters of focus for both host country stakeholders and for project sponsors. Sponsors are likely to also be focused on broader questions relevant to their investment (including applicable fiscal terms, local incorporation/registration requirements, economic and legal stability) as part of the concession terms, but these matters are outside the scope of this note.

ii. Exclusivity

A crucial issue to determine when structuring the land-concession agreement is the extent of exclusivity that will be granted to the sponsors in relation to the relevant site(s) and to what extent third parties (including other governmental agencies) will be prevented from pursuing competing activities (a) on the relevant site(s) and (b) in the host country. This is likely to be a key early focus for project sponsors given the limited number of sites that may be suitable for the development of green hydrogen projects.

As green hydrogen projects (especially those involving the construction of greenfield renewable electricity facilities) will often require large tracts of land, host countries will wish

to consider how to ensure that concession arrangements achieve the appropriate balance between granting such rights to sponsors as are sufficient to attract and secure investment, while not unnecessarily foreclosing access to third parties. This might include, for example, concession fees being linked to the size of the area over which the concession applies, obliging or incentivising sponsors to surrender a proportion of the concession area from time to time prior to final site selection as their investigations narrow down the potential site area(s), ensuring that the duration of each phase of the concession is appropriate for the activities envisaged to be conducted during that phase.

Where concession holders may require access to existing or planned critical infrastructure (such as port facilities), they are likely to seek assurances in the concession and/or applicable law as to their access and/or development rights (whether on an exclusive, priority or shared basis) in respect of such infrastructure, particularly in circumstances where competing projects may emerge.

The direct and indirect transferability of interests under or in respect of the concession will be of fundamental importance to sponsors. While host countries will wish to ensure that there are appropriate controls on the transfer of interests, and to ensure that concession holders are motivated and capable to perform the activities contemplated by the concession, in practice concession holders will wish to retain the flexibility to introduce additional sponsors to the project in order to bring further technical, commercial and/or financial support to the project as well as to share risk. Concession holders may also wish to be entitled to grant security rights over their concession interests in connection with third party debt financing arrangements, particularly any project financing of the green hydrogen project infrastructure to be developed under it. The extent to which such interests may be granted and enforced will be a key area of focus for third party financiers and thus for sponsors intending to raise such finance.

iii. Payment terms

Fiscal arrangements for green hydrogen projects are outside the scope of this note, though there will naturally be an interaction between (a) the benefits accrued by the host country and local communities through these fiscal arrangements and (b) the payments to be made under applicable land concession arrangements.

Payments for land concession rights may assume various forms and will likely vary greatly depending on the characteristics of the applicable land and regulatory regime as well as the broader economics of the project in question. Examples include:

1. a fee payable on award of the concession;
2. a periodic fee payable by reference to the geographic area covered by the concession from time to time (which fee may vary depending on the phase of the concession); and/or
3. fees or royalties linked to production and/or sales and/or net profits; and/or
4. direct equity participation rights for a nominee of the host country.