

Cleantech: an investment opportunity strewn with legal pitfalls

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Investing in Cleantech and Sustainability: Opportunities and Challenges

By 2050, it is projected that more than half of all new cars sold will be electric. This figure was unthinkable even a few years ago. Mentalities have shifted and societies are moving towards a more sustainable way of life. The urgency of curtailing climate change has sunk in and what was once barely an afterthought is now a frontline topic for many governments.

Cleantech is a catch-all term for the technologies and the companies developing and applying them aiming at improving environmental sustainability. It covers a cross-section of industries ranging from extraction to manufacturing, energy generation, urban mobility, aviation, smart cities, agriculture, research, and many more.

After a faltering start in the mid-2000s, the impact of influential public figures from Bill Gates to Greta Thunberg has been gaining momentum and driving the agenda for change. Bill Gates' Breakthrough Energy Ventures raised \$1billion in 2016 and deployed those funds into more than 40 start-ups. In 2021, Breakthrough Energy Ventures raised another \$1billion, further demonstrating the interest of investors in cleantech opportunities.

An interest by the Middle East, and in the Middle East, for cleantech

In line with the rest of the world, the Middle East is acutely aware of the challenges brought by climate change. The region is located in harsh climate conditions bound to be exacerbated by global heating. However, in spite of their significance as oil-rich economies, the GCC nations are parties to the Paris Agreement, and have plans of their own to fight climate change.

In the United Arab Emirates, the UAE Energy Strategy 2050 aims to increase the share of clean energy from 25% to 50% by 2050, and reduce its carbon footprint from energy production by 70%. In the Kingdom of Saudi Arabia, Vision 2030 has emphasized the need for sustainable growth and clean technologies. The announcement by Saudi Arabia of a carbon-emission-free 170 kilometres long linear smart city, called The Line, with no cars and only public transportation, is a striking image of integrating clean technology into cities and building towards a sustainable future.

Moreover, Middle Eastern governments have embraced boldly the opportunity to present themselves as a

testing grounds for futuristic sustainable technologies. The drive of GCC countries to diversify from an economy dominated by oil, and the vision to undertake massive and ambitious projects, have acted as a magnet for regional and global technology companies seeking to pioneer cleantech. The allure of political and economic will on the part of GCC governments to fund and prove the viability of technologies is also likely to act as a catalyst for development of clean technology solutions and markets.

Legal challenges and the economics of cleantech companies

By comparison with say software companies, cleantech companies are likely to have longer sales cycles and longer investment cycles. The underlying assets can often involve expensive hardware or deep technologies rather than pure operations, and this particular aspect impacts the overall life cycle, funding cycle and route to exit for cleantech companies.

The dominant players in the cleantech ecosystem are also vastly different than in the tech world of Silicon Valley. Platform and software companies such as Facebook, Amazon, Google and Microsoft are able to access staggering sums of money to acquire start-ups that are value accretive by virtue of their mass market adoption and captive 'eyeballs'. This in itself acts as a catalyst for both the entrepreneurs who develop software and platform technologies and the venture capital investors who back them betting on rich exits based on scale alone with economics frequently playing little or no role in valuations.

The value proposition for cleantech investors is quite different and this is driven in large part by the hardware-driven economics of cleantech companies which are much less capital efficient and which have completely different financing and risk-adjustment and risk-mitigation dynamics. Early backers of cleantech's are likely to be the corporate venture capital (CVC) arms of oil and gas or powergen operators in the space of clean energy or airlines or aviation and automotive OEMs in the case of clean mobility solutions. The considerations that inform CVC investment decisions are entirely different to those of the VC world and are based on much bigger investments with substantially different equity structures, debt tenors and terms, debt to equity conversion mechanics, shareholder rights and many other factors.

Strategic acquirers in the cleantech ecosystem are much more likely to be industry players albeit there may be an emerging market for institutional investors to start backing publicly listed cleantech operators or, more likely, the listing of cleantech operators via reverse takeovers through Special Purpose Acquisition Companies (SPACs) on U.S. exchanges. Nevertheless, the commercial dynamics of cleantech companies require them to contract with supply chain and customer behemoths across logistics, manufacturing, technology and component OEMs as well as local and national governments whether in the area of energy offtake or smart city planning and regulation. Automatically, this drives a different discussion around valuations and the exit trajectory.

The combination of these factors as well as the need for much deeper capital deployment to fund deep-tech hardware R&D make for a slower life cycle than typical tech start-ups. In the lifespan of a cleantech company, founders may go from bootstrapping to venture capital, to private equity, mezzanine financing, bridge loans and finally an IPO or acquisition. This can take up to 20 years where tech companies will tend to gravitate around a 10 years' life cycle to exit.

As a result, governance decisions as well as economic engagements have even stronger repercussions than in typical tech companies. The need for legal advice is all the more important that the entity will last longer, and cycles between re-negotiations are also longer. Agreements between shareholders are key to get the company to the next financing event. Furthermore, it is crucial to understand the requirements and desires of various actors of the financing world, who may have competing or diverging interests at times. A venture capital fund will have different requests than a late stage private equity, and proper counsel is

essential to reconcile different types of shareholders cohabitating on a cleantech company's cap table.

The diversity of the cap table could be seen as a liability on its face. However, the success of cleantech companies is born from their ability to bring disruptive technologies to mass markets. Without a technology that can impact the general public, be it directly or indirectly, there is no chance for profitability. This unique mix is achieved by leveraging the expertise and relations of diverse shareholders, hence the importance of legal advice to properly structure the relationship and keep everyone engaged in the development of the company.

The wide array of legal considerations of a cleantech company

In addition to corporate and financing considerations, cleantech companies face many legal questions.

The need to optimize their assets and protect the vast amount of capital invested creates a need for registerable and non-registerable intellectual property protections. This is heightened by the fact that many companies find their value in their cutting-edge technology at first, and that the deployment comes once the technology is mature. This is a divergence from software companies that will build the technology alongside its deployment and growth, making them less capital intensive at first.

An example can be new processes or use of new materials such as insect farming in Agtech, sensors in smart cities, new engineering parts in extractive technologies, new processes in research... In any case, prospective investors will want to see that the assets are protected.

The need for partnerships makes it that typical cleantech companies will have many commercial contracts with a variety of partners. Entering into a relationship with an industrial partner will be different than with another start-ups, and the technical nature of those contracts will require specialized lawyers.

Insurance may also be a concern for certain companies. When dealing with the general public, insurances will need to be offered. Transportation companies focusing on electric vehicles and planning to offer their services to the general public will need to form a relationship with insurance providers.

The key role of government relations and licensing requirements

Often operating in strategic industries, and looking to reach international presence, cleantech companies are bound to run into governmental regulations. They will need to obtain proper licenses and often speak directly with authorities.

Considering the need for mass market adoption for many companies in order to have a profitable business model, those legal requirements will be repeated in every country. Companies will need to be licensed to operate in every market they target and maintain good relations with national authorities.

Focus on data: the example of Smart Cities

Smart Cities are an overarching industry putting in motion many technologies and operators in the cleantech space. There is a need for transportation, efficiency, visualization, and many other verticals. The key instrument of the smart city will always be a vast universe of sensors, capturing data from citizens, vehicles, buildings, public facilities and so on and leveraging that data to drive machine learning, artificial intelligence and further improvement of the technologies and their implementation. The regulation of Internet of Things (IoT) applications and its interconnection with data privacy considerations is a challenge that has yet to be cracked in most developed markets and one of the prime areas for development in the MENA markets is in this specific area. Add to this, a robust and deeply sophisticated framework for dealing with cyber risk, artificial intelligence regulation and the body of judicial experience required to effectively implement these laws and regulations, and you find a huge room for legislative and regulatory change. This needs to take place at lightning speed if it is to keep up with both the opportunity and the vulnerability that such technologies present.

Citizens are both the beneficiaries and actors, builders, and test-subjects of the smart city, and companies are collecting a vast amount of data. In the past few years, more and more jurisdictions, led by the European Union and GDPR, have adopted stringent data regulations placing the data subject in a powerful position and with punitive consequences for companies that fail to comply. Oftentimes, the success of a smart city company, and more generally of a cleantech company, relies on its ability to collect and use this data. It is of absolute importance that the technology is not only compliant, but built on a privacy-by-design basis. Given the amount of capital that cleantech investors are required to make available, cleantech operators should expect no compromise when it comes to full regulatory and legal compliance, not to mention robust IP and asset protection strategies.

Al Tamimi & Company's corporate commercial team regularly advises on a variety of matters involving cleantech companies, including financings. For further information please contact [Abdullah Mutawi \(a.mutawi@tamimi.com\)](mailto:a.mutawi@tamimi.com) or [Hugo Cugnet \(h.cugnet@tamimi.com\)](mailto:h.cugnet@tamimi.com).