

## DATA INFRA ENTERS THE PF SECTOR

THE GROWING DEMAND FOR DATA AND THE INFRASTRUCTURE TO HOST IT HAS PROVIDED A NEW AREA OF OPPORTUNITY – DATA CENTRES. BY **WILL MARDER**, HEAD OF **WILMINGTON TRUST PROJECT FINANCE**.

It's very likely you are reading this article on a computer or a device powered by an energy source that was or is part of a project finance transaction. How is that?

Power generation has made use of private financing for decades. Furthermore, there is a possibility that the electricity that charges your phone, tablet, or computer is provided by wind or solar projects. Want to save the article to your library? Chances are that the cloud or server you are accessing is also powered by turbines or panels.

Project finance has long been a part of many important sectors of the economy, including conventional power, renewable energy, oil and gas, and transportation.

These large-scale projects have relied on private financing arranged by banks and institutional investors for many years. However, the growing demand for data and the infrastructure to host it has provided a new area of opportunity – data centres.

Cisco predicts that hyperscale data centres, mainly cloud-based data, will grow from 338 in number at the end of 2016 to 628 by 2021.

While most companies do not divulge the physical size of their data centres, it is estimated that a “medium” centre allows for 5,000–20,000 square feet of computing space, while a “mega” centre ranges from 225,000 into the multi-millions of square feet.

Even Internet service providers with the deepest of pockets are turning to specialised sources of financing for these capital-intensive investments.

### **Demand for data and renewables**

Consumer demand for technology has not only necessitated the construction of colossal structures, but also the energy required to operate them.

It is estimated that by 2023, data centres will consume one fifth of the Earth's power, becoming the largest global energy user. Data centres have the fastest growing carbon footprint in the entire IT sector, mainly due to technological advances such as cloud computing<sup>1</sup>.

It is encouraging that some of the biggest providers of data services are also listed within the top ten EPA Green Power Partner list, including Google, Microsoft, Intel, Apple, and Cisco.

More and more, these companies are sourcing energy from renewable sources to power their data centres. BloombergNEF (BNEF) finds in its

1H 2019 Corporate Energy Market Outlook, that some 13.4GW of clean energy contracts were signed by 121 corporations in 21 different countries in 2018.

In addition, organisations such as the Renewable Energy Buyers Alliance (REBA) are giving smaller and emerging corporate buyers new ways to satisfy their needs for energy.

### **Corporate power purchase agreements**

Corporate power purchase agreements (PPAs) have propelled the growth of data centres by allowing companies to purchase clean energy on a wholesale level directly from developers, enabling them to reduce the carbon footprint related to the huge energy demands of those data centres.

The PPA defines the commercial terms for the sale of electricity between the buyer and seller, including when the project will begin commercial operation, the schedule for delivery of electricity, penalties for under-delivery, payment terms, and termination.

A PPA is the principal agreement that defines the revenue, and ultimately the credit quality, of a power project and is thus a key instrument of its financing.

Some of the largest companies active in the internet economy also happen to have an interest in preventing global warming, and seek to reduce the carbon footprint of their global businesses.

An initiative known as “RE 100” encourages companies to source 100% of their energy needs from renewable sources. This initiative, a collaboration between The Climate Group and CDP, formerly the Carbon Disclosure Project, currently counts 176 global corporations that have committed to satisfy their power demands from renewable projects.

Included in this list are Apple, Amazon, Google, Facebook, eBay and SalesForce – the very same entities that are seeing huge demand for data infrastructure.

This demand for renewable energy and the need for capital to finance ever-larger data centres has brought leading global internet companies into the project finance market for the first time. Prior to 2017, most data centres were either financed on-balance sheet or in the real estate market. In 2017 and 2018, data centres emerged as a new asset class in the project finance sector.

Driven in part by the availability of capital and the attractiveness of data centres as an alternative

asset, banks and institutional investors have provided financing for the construction and long-term operation of data centres in the US and around the world. Some project that the global data centre construction market might be worth up to US\$57bn by 2025<sup>2</sup>.

Many of these data centres are supported by corporate PPAs. Data centre owners Amazon, Google, and Microsoft have entered into corporate PPAs with renewable energy projects to offset the emissions and power usage of cloud computing.

In fact, Google has become the largest corporate buyer of renewable energy in the world, and has taken steps to eliminate all carbon emissions from its footprint. Three of the largest players – Google, Apple, and Amazon – have gone a step further and have gained approval from the Federal Regulatory Energy Commission (FERC) to buy and sell electricity in US energy markets.

### New sources of capital funding

Data centres have just recently emerged into the project finance sector, taking advantage of the strong availability of capital and the structural benefits that project finance provides.

Borrowers in the project finance space benefit from multiple sources of capital that can be highly structured to suit the needs of their project. Often, the financing is long-term, non-recourse and off-balance sheet for the project's ultimate owners.

Providers of debt capital in the project finance sector include domestic and foreign commercial banks, institutional investors and infrastructure funds, which have emerged as a new and active source of capital in recent years.

The project finance sector has long provided financing for renewable energy projects, dating back 15–20 years for mainstream projects. The strong desire by many of the most active internet commerce firms will certainly drive the development of additional clean energy projects, which in turn will power some of their data centres. With the convergence between data infrastructure and renewable energy, it is likely that we will see projects in the near future that bring together components of both of these sectors.

The role of project finance in funding renewable energy projects continues to evolve. As deal volume grows with capital coming from new and existing players, lenders may turn to third-party providers of trust and agency services.

Wilmington Trust, which specialises in providing those services on project finance transactions, has closed five data centre transactions in the past 12 months.

We serve as administrative agent, collateral agent, and depositary agent on those transactions, ensuring that the deals run smoothly and efficiently over their financing terms.

As demand for renewable energy grows, so does the demand for sources of quality financing. It is important to find reliable partners who understand both the project finance space and the renewable energy industry.

### Renewable Energy Forum

The notion of the convergence of communications infrastructure and renewable energy prompted Wilmington Trust to bring together industry leaders and partners to discuss these trends.

Some of the best minds and advocates for renewable energy gathered in New York on June 5 2019, including George Pataki, Senior Counsel at Norton Rose Fulbright and former governor of New York, who provided the keynote presentation.

Brian Thomas, recent Business Architect for Growth & Sustainability at Equinix, spoke about data centres and their purpose to provide ever-growing amounts of data in shorter and shorter amounts of time, in order to satisfy the needs of technology that often demands nearly instantaneous response.

Data centres have large energy requirements to both power the facility and to regulate the heat generated by the internal network and storage infrastructure. This is where renewable energy enters the equation, and where the future of data centres and sustainable power are intertwined.

The forum also featured a panel discussion focused on the evolving role of project finance in the renewable energy space, including the uncertain future of tax credits, which have helped fuel investment in renewable energy projects.

According to the panel, there are more clients who want to explore building renewable energy products in Opportunity Zones, because having the ability to build renewable energy projects in those zones would help offset the loss of tax credits in subsequent years.

The panel discussed the strong availability of capital in the project finance market today, but noted that excess capital has created both benefits and liabilities for renewable energy.

While having more sources of financing is good for borrowers, there are unique risks in renewable energy deals. Deal partners need to understand the complexities and nuances of renewable energy projects, especially the risks.

With the expanding number of corporate PPAs changing the face of traditional project counterparties, those risks may be shifting from the typical places where they have mitigated. Many transaction parties, including developers, investors, lenders and offtakers, are learning how to best structure these deals for long-term success.

Panellists included:

- Jesse Grossman, CEO and co-founder of Soltage;
- Benoy Thanjan, founder and CEO of Reneu Energy;
- William Demas, executive director at Copenhagen Infrastructure Partners;
- Katherine McElroy, Director of Clean Energy Infrastructure Credit at Capital Dynamics;
- John Marciano III, co-head of Global Project Finance at Akin Gump LLP, who served as moderator for the panel. ■

### Footnotes

- 1 – Data Economy
- 2 – CBINSIGHTS Future of Data Centers