

Driving Economic Growth in Northern Norway with Sustainable Data Centers

Background

The “Norway 2030-2040 The Business Opportunity Report” stated that “a dramatically changing climate presents an urgent and pressing human challenge, demanding action from all parts of society. But while climate change is most a problem to be solved, the transition to a low-carbon economy also represents a commercial opportunity.” The report highlighted the “high tech opportunity” as Data Centers. The report stated that “drawing on our hydropower, our advanced technology and a highly skilled workforce, we could build up domestic high-tech industry across sectors likely to be central to the low carbon economy. Our research and conversations with Norwegian companies points to data center solutions, aluminum manufacturing and the production of offshore wind technology as particularly exciting prospects.”

Why Northern Norway?

Northern Norway with its abundance of renewable energy, proximity to dark international fiber, cool climate, secure locations and highly educated workforce provides the key elements for the development of a robust data center industry in Northern Norway. Elon Musk added “Norway has a tremendous structural advantage with the Fjords and being able to generate immense amounts of hydropower. That's something that I think can be done in a way that's aesthetically in harmony with the environment and doesn't disrupt the local ecology.” The region’s electricity production is already decarbonized and is 100% based on renewable energy, mostly hydropower. Norway and especially Northern Norway, is expected to have an increasingly large surplus of renewable energy in the coming years. Norwegian hydropower is a superior renewable source for a data center, with zero CO2 emissions and because of its ability to deliver power continuously.

What is the role of the Data Center?

The Data Center is the brains of the Internet and the engine that facilitates commerce and the global economy. Google, Facebook, Amazon, Microsoft, Apple and many governments have large data centers that operate their businesses and governments. All other companies worldwide use open colocation data centers. Data Center companies are under scrutiny by environmental NGOs because of their increasing power consumption and carbon footprint. Google has stated that it will run 100% on renewable energy in 2017.

What is driving Data Center Growth?

Data Center growth is being driven by a 24/7 intelligent always-on global economy. The growth of smartphones which numbers in the billions along with millions of self-driving vehicles, the consumer and industrial Internet of Things, nano-technologies, defense spending, university research, smart building and homes, entertainment and more. A recent report by Kleiner Perkins report shows data growing from 12 ZB in 2015 to 163 ZB by 2025.

How will Data Centers Drive Economic Growth in Northern Norway?

A report by Boston Consulting Group “Digital Infrastructure & Economic Development – An Impact Assessment of Facebook Data Center in Northern Sweden” looked at the impact of large-scale data centers to the Swedish economy. The analysis highlighted economic development and job creation locally, as well as the implications for the overall Northern Swedish economy. Given that many of the same business conditions exist in Northern Norway, this is a projectable study for comparison. Boston Consulting estimates “the establishment of Facebook’s data center is estimated to generate a total of SEK 9 billion in full economic impact (direct, indirect, and induced impacts) and to engage 4,500 full-time workers over the course of ten years nationwide; about half of the economic benefits will accrue locally. In 2012 alone, Facebook contributed as much as 1.5 percent of the local region’s total economy. Furthermore, the establishment of Facebook’s data center has laid the foundation for Sweden’s competitive advantage in attracting additional data-center investments.”

Data Center Demand Very Strong in Western Europe

Boston Consulting estimates that “global data-center demand will continue to increase, with more than sixty new large data centers expected in Western Europe by 2020. Norway can compete for these investments building a world class a substantial data-center industry.

About Kolos (www.kolos.com)

Kolos is creating the most innovative, energy efficient & secure data center in the world, powered by 100% renewable energy, in Northern Norway. Beautifully integrated into the natural landscape, the Kolos Data Center will be the largest green data center in the world, bringing jobs and industry to the community of Ballangen and the surrounding communities. Kolos is changing the paradigm in hosting infrastructure, moving away from dense high cost fossil fuel driven areas, to an area abundant in clean renewable energy.