Sustainable information technology services are cloud sourced hosting services powered with clean energy.   This website is hosted on a server located in Iceland where data centers are powered with low cost 100% clean hydroelectric and geothermal generated electricity.

Cloud technology allows cloud application service providers and general purpose hosting services to consider clean energy when deciding how and where to source their workload or add additional capacity.

But why should we think that powering technology with cleaner energy is important? The fuel mix used to supply today's data center power requirements is generated predominantly with fossil fuel and varying degrees of renewable energy, primarily hydroelectric, with growing amounts of solar and wind energy. Nuclear power, while not renewable, produces virtually zero carbon emissions and is second only to fossil fuel as an energy source for electricity generation. The two primary fossil fuels; coal and, increasingly, natural gas, make up approximately ~65% of the global fuel mix for electricity generation. The dramatic growth of information technology has resulted in a dramatic increase in the industry's greenhouse gas emissions.

The impact of information and communications technology (ICT) on climate change is clearly net positive as energy efficiency improvements spread through automation, digital meetings, fewer trips to the mall and the like reduce emissions from general economic activity. The rapid growth of ICT related carbon emissions represents a major, and preventable, source of green house gas pollution. The environmental and economic costs of climate change that have starting to show up in the bottom line in the form of supply chain disruptions, higher energy and insurance costs, greater public awareness of the sources of pollution, and subsequent demands for sustainable products and services. ICT related carbon emissions currently represent approximately 3-5% of total global greenhouse gas emissions (GHG). With IT related power consumption growing at ~10% annually the IT industry could reach one Gigaton of carbon emissions by 2020. This puts the ICT industry in the same class as the airline industry in terms of CO_2 emissions. Fortunately, technology has the ability to come to its own rescue through efficiency improvements and by sourcing its energy requirements with clean energy.

While cloud technology was initially used to improve efficiency and availability it's current growth Cloud's is being driven by a much stronger incentive - the internet. New cloud/web based businesses are generating vast quantities of revenue and information as they meet strong market demand for innovative new low cost cloud based services. With cloud market growth estimated   in double digits for

the foreseeable future the energy supply chain for any business in this space is becoming a very strategic C-level priority.

Energy security is now a primary consideration for decision makers seeking to mitigate operational risks in their business. Geopolitical developments are currently driving rising uncertainty over the cost and availability of electricity in the UK and EU. The ability of cloud technology to shift major power intensive operations like IT infrastructure to secure locations like Iceland, Scandinavia, or Canada where clean, available, low cost energy can improve energy security and generate significant benefits:

- Eliminate /reduce IT related carbon emissions
- Improved energy security: secure location, independent and clean energy suppy, long term power contracts of up to 15 years with low, fixed rates (Iceland)
- Reduced server operating cost resulting from low electricity rates
- Reduced exposure to carbon emissions regulation
- Enhanced brand value
- Highlight the importance of corporate leadership through corporate action to combat climate change

We are developing new ways to deliver Sustainable Technology Services (StS) by working with innovative partners whose vision and commitment will help build the new low carbon economy.   These services will help firms rapidly increase the use of clean energy while reducing their dependance on fossil fuels.
Our Icelandic service partner, Nyherji hf, has built a cloud service infrastructure that is highly resilient, accessible, expandable, and powered from Iceland's
100% clean, renewable energy. S
mall businesses to large corporations will be able to easily access the web based service for public or private cloud solutions, e.g. infrastructure as a service (IaaS), software as a service (SaaS), platform as a service (PaaS)
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Please feel free to explore the site and learn more about our partners capabilities. Try the energy calculator to estimate the level of energy cost savings and carbon and water use reductions that are possible when your cloud workload is sourced with 100% clean energy.

Paul Halsey

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CarbonZero Development Services

*Trademark approval pending