How will climate change impact telecommunications & data center companies?

From extreme storms to incremental changes, telecommunications and data center companies are already feeling the impact of a changing climate. These impacts threaten to disrupt their supply chains and operations as well as cause costly damage to assets and infrastructure of companies in both sectors. This fact sheet offers some first steps toward increasing companies’ resilience to climate change in the Midwest.

Climate is changing and impacts on telecoms and data centers are already being felt. Hurricane Sandy showed the devastating impact of extreme weather on telecoms (see case study below).

In the Midwest, temperatures are already rising, and extreme rainfall events and flooding have increased during the last century. In 2011, 11 of the 14 US weather-related disasters with damages of more than $1 billion affected the Midwest.

The Midwest is particularly vulnerable due to its energy-intensive economy. Hotter temperatures increase cooling demands, stressing energy systems. Midwest cities are also characterized by aging infrastructure which is vulnerable to flooding, heat waves, and severe ice and snow storms; expected to increase in severity and frequency.

The supply chains supporting telecoms and data centers are complex and face a wide range of potential impacts from climate change. Complexity means that climate impacts to one part of the supply chain in one region of the world can have consequences for other parts of the supply chain in other regions. Companies need to look for climate risks in each tier of their supply chain.
determine adaptive capacity

Use this checklist to start assessing how resilient your business is to less predictable weather and a changing climate.

- What backups and contingencies do you have in place to protect vital assets or operations?
- What financial options do you have in place that allow you to rebound from disruptions or change?
- How have past disruptions or extreme events impacted your business?
- Do critical tiers of your supply chain have redundancies in place to serve as backups?
- What are your business planning time frames?
- What shared infrastructure do you have?
- What is the rate of technological development and infrastructure lifespans? Shorter lifespans provide flexibility to respond quickly to changes in climate.

assess response strategies

There are many ways to build resilience. Here are some initial responses to consider.

- **Relocate or fortify** critical telecom assets such as terminals, cell towers, power facilities, or central offices out of existing and future floodplains, as well as out of coastal areas threatened by sea level rise or storm surges.
- **Move equipment out of basements or ground floors in areas at risk of flooding**, or put them on rolling carts.
- **Decouple communication infrastructure from the electric grid** where possible, for example with microgrids.
- **Identify resilient energy synergies.** Energy efficiency strategies not only reduce emissions but also lower your dependency on the electricity grid, which can suffer due to increased energy demand during heat waves and storm damage.

learn more

The full report, *Climate Risks Study for Telecommunications and Data Center Services*, is available at [www.sftool.gov](http://www.sftool.gov)

The National Climate Assessment has more figures and details about climate change in your region at [nca2014.globalchange.gov](http://nca2014.globalchange.gov)

Questions? Please email adaptation@gsa.gov or visit [www.gsa.gov/climateadaptation](http://www.gsa.gov/climateadaptation)

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