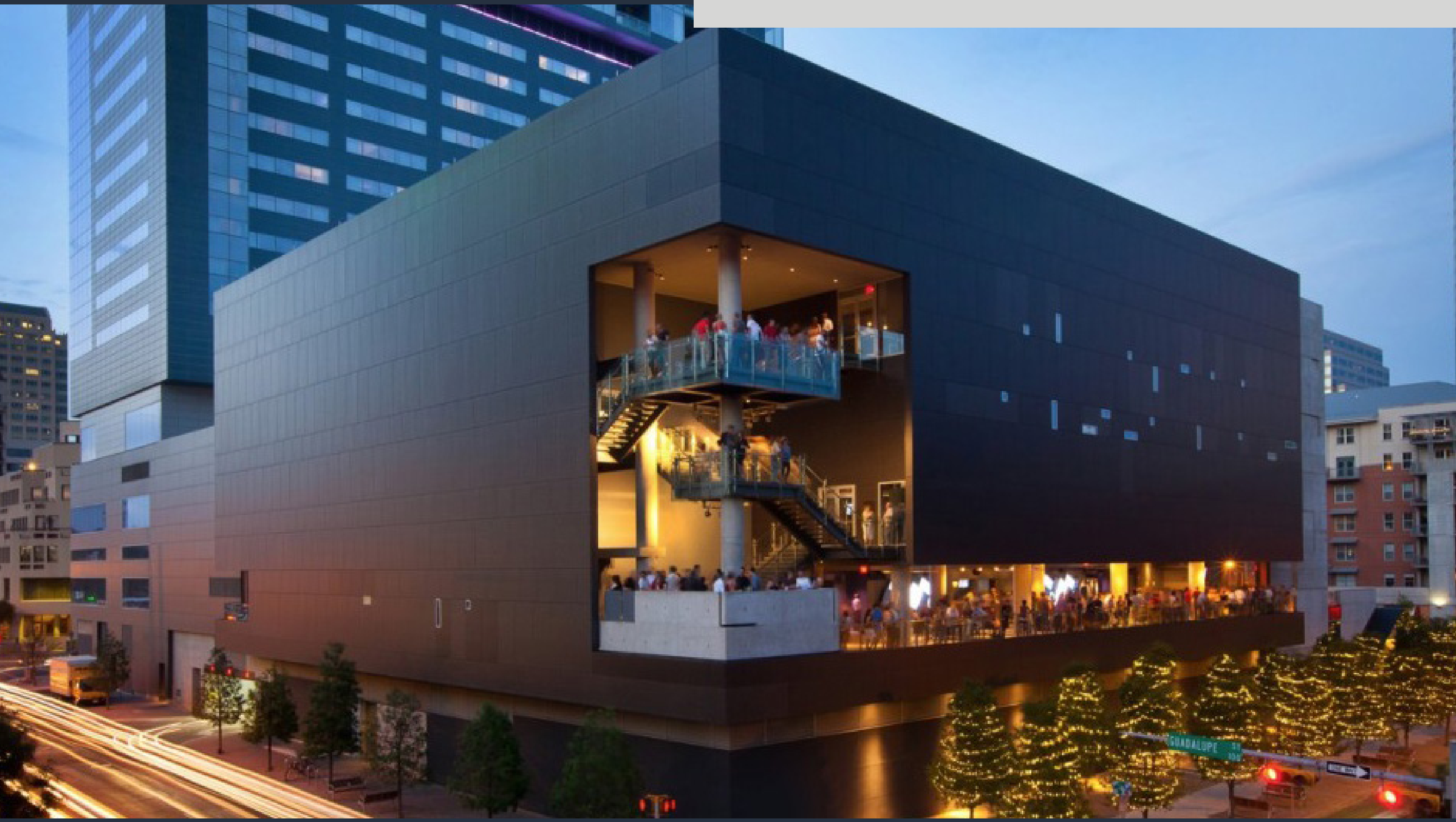
OPEN SPECTRUM



AUSTIN

Data Center Market Report

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About This Report

Open Spectrum provides intense data center intelligence, experience and training. As a part of our ongoing commitment to the data center marketplace, the Austin Market Report has been designed, in coordination with members of the Open Spectrum Alliance, to support our agents and their customer's increasing need to centralize IT operations, hardware, and data storage.

Additional Contributors

The following organizations are a part of the Open Spectrum Strategic Alliance and provide contributing information to this Market Report.

NEF's FiberLocator product is a comprehensive telecom, colocation and lit building database whose data can be accessed in single servings with a snapshot, in ongoing research with the online application, in customized report deliverables and also via API (application programming interface).

Structure Research is an independent research and consulting firm, with a special focus on the Internet Infrastructure Market. They publish insightful research and analysis with a uniquely informed perspective.

Lathrop & Gage LLP is a US based law firm with a cross functional team of experienced partners. Our engagement is focused specifically on those in the firm with intimate knowledge of the data center and telecommunications industry who have been on the leading edge of industry-related local, state and national tax legislation issues.

About Open Spectrum

Open Spectrum is a data center marketplace consulting firm working with buyers, sellers and investors in mission critical infrastructure around the world. Our team has personally negotiated hundreds of contracts and toured hundreds of facilities across the country. Our targeted data center and hosting education programs and supporting materials have become the de facto training standard in the industry.
To learn more, visit: openspectruminc.com.

Local Spotlight

With a long history in related technology and services, as well as exceptional infrastructure, Austin is an ideal location that provides the necessary support and qualified technical workforce for data center operations.

There are currently 23 colocation data centers in Austin, including CyrusOne, OnRamp, Level 3, Digital Realty Trust, and ViaWest.

Top Industry giants, such as IBM, Cisco, Citigroup, Dell, Hewlett-Packard, and Oracle all have facilities within Austin, ranging from headquarters and R&D operations, to manufacturing and mission-critical enterprise data centers.

CyrusOne Austin Data Center I
7301 Metropolis
Austin, TX 78703

Local Industry News

CyrusOne Launches Its Third Austin Data Center

"Phase one provides 55,000 square feet of colocation space and 3 MW of power. The data center can accommodate 120,000 square feet of colo space and up to 18 MW of power at full build-out."*

Zayo Expanding Miami Data Center

"Data Foundry Inc is ready to break ground on Texas 2, a 325,000 square-foot data center in Southeast Austin. Data Foundry was ranked No. 2 in Austin Business Journal's most recent list of largest data centers with 290,000 square feet of space locally." **

vXchnge Buys Eight Sungard Facilities in Edge Data Center Markets

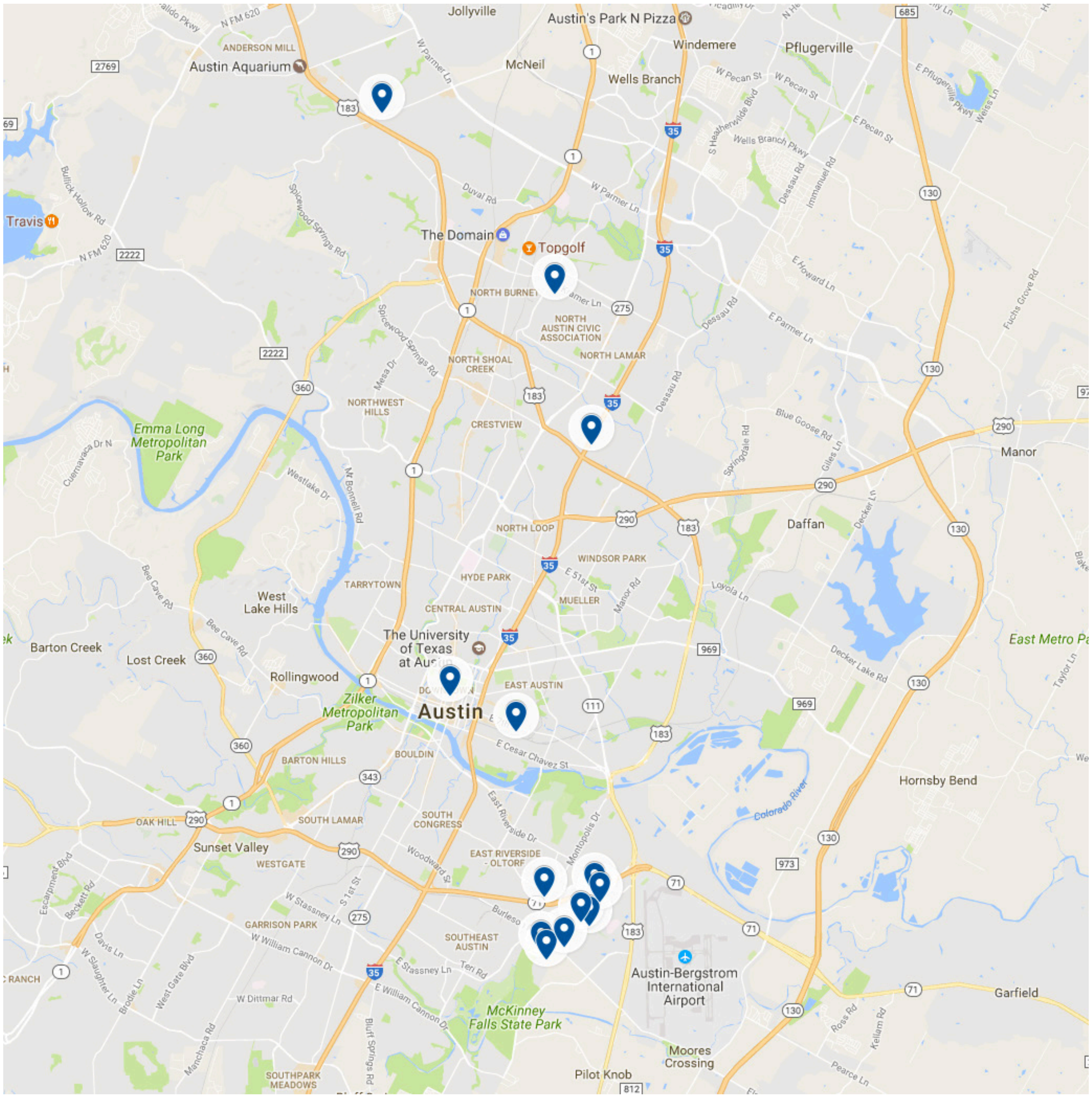
"vXchnge acquired the assets and operations teams associated with former Sungard AS data centers, which are in use by customers. vXchnge's target user base consists of network-centric businesses needing to extend geographic reach in underserved big metro areas [including Austin]."***

Austin Data Center Builds "Hum Along"

"Though energy costs are higher in Austin — about 25 percent higher than in Dallas, which is considered one of the top data center markets in the U.S. — data center developers such as Digital Realty continue to see demand in Austin despite the power premium."***

*source: http://finance.yahoo.com/news/global-data-center-provider-cyrusone-120000120.html
**source: http://www.mystatesman.com/news/business/google-fibers-austin-rollout-trudges-onward/nqK9L/
***source: http://www.datacenterknowledge.com/archives/2014/07/21/rackspace-to-use-another-texas-mall-as-office-real-estate/ ****source: http://www.bizjournals.com/austin/print-edition/2015/04/24/austin-s-tech-hub-reputation-pays-off-data-center.html

13 Commercial Data Centers House 9 Different Providers Within the Austin Region



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Data Center Strategy - Optimization - Education

Local Data Center Directory

Name	Retail	Whole-sale	Hosting	Location	Type (Ticker: Exchange)	Address	City
Alpheus Communications	x			Regional	Private	1905 E 6th Street	Austin
CyrusOne DC II	x	x		National	Public REIT (CONE: NAS-DAQ)	7301 Metropolis Drive, Bldg #6	Austin
CyrusOne DC III	x	x		National	Public REIT (CONE: NAS-DAQ)	7100 Metropolis Drive	Austin
Data Foundry AUSTIN 1	x	x		Regional	Private	7401 E Ben White Blvd., Bldg #	Austin
Data Foundry TEX-AS 1	x	x		Regional	Private	4100 Smith School Road	Austin
Digital Realty Trust	x	x		Global	Public REIT (DLR: NYSE)	500 Metro Center Drive	Austin
Level 3	x			Global	Public (LVLT: NYSE)	4207 Smith School Road	Austin
Level 3	x			Global	Public (LVLT: NYSE)	1825-A Kramer Lane	Austin
OnRamp I	x		x	Regional	Private	2916 Montopolis Dr. Suite 300	Austin
OnRamp II	x		x	Regional	Private	7000-B Burleson Rd. Suite 400	Austin
Vxchnge	x			National	PE Backed Private	8025 North IH Highway 35	Austin
ViaWest	x	x	x	North Amer-ica	Owned by Shaw Commu-nications (SJR: NYSE)	205 W. 9th Street	Austin
Zayo / Zcolo	x		x	Global	Public (ZAYO: NYSE)	7218 McNeil Drive	Austin

List of Major Peering Exchanges in and Around Atlanta

Exchange name	Long Name	City/Region
CyrusOne IX Austin	CyrusOne Internet Exchange	Austin

*source: peeringdb.com. Accessed April 2, 2015.

Local Metro Fiber Map

7401 East Ben White Blvd, Austin TX
1 Mile View

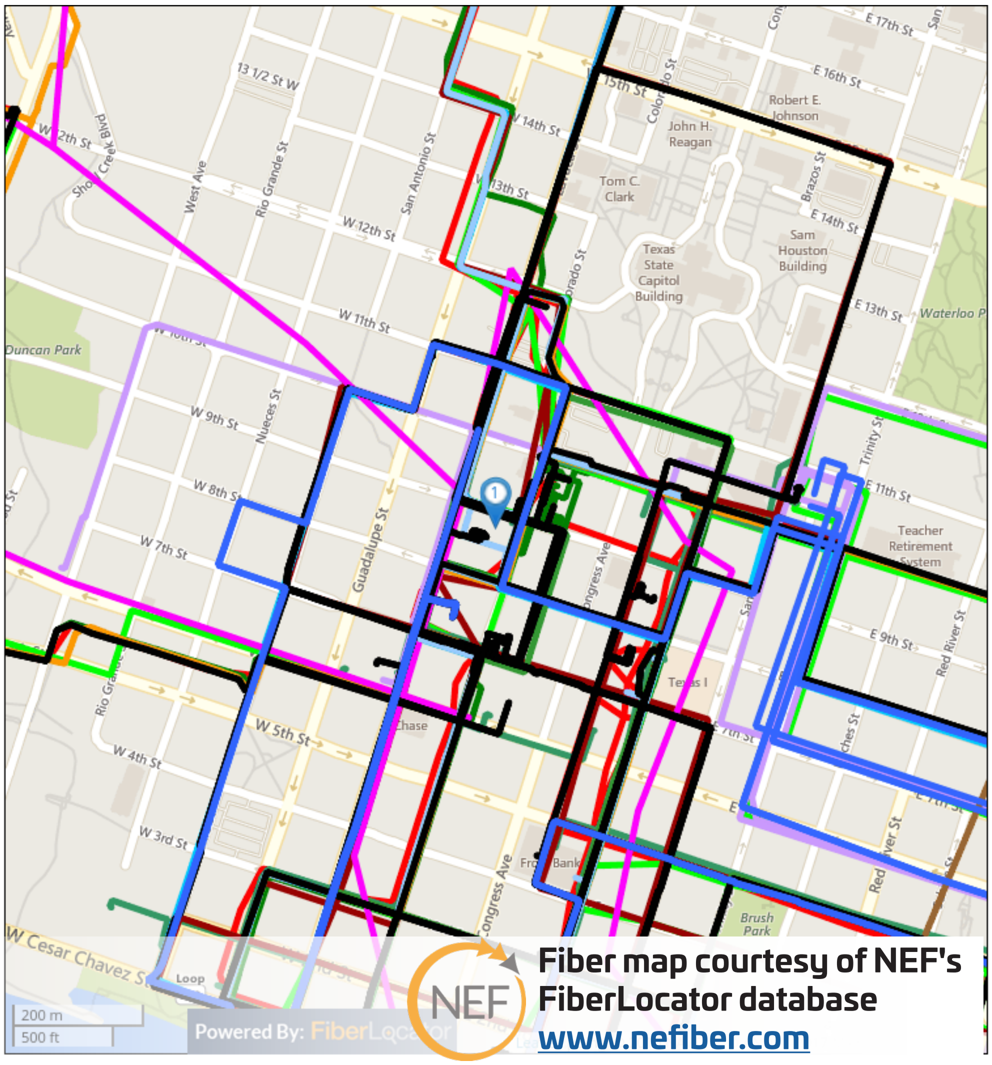
FiberLocator

Austin Metro Networks

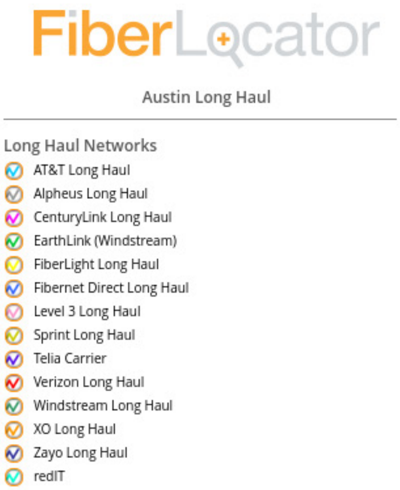
205 W 9th St, Austin, TX 78701

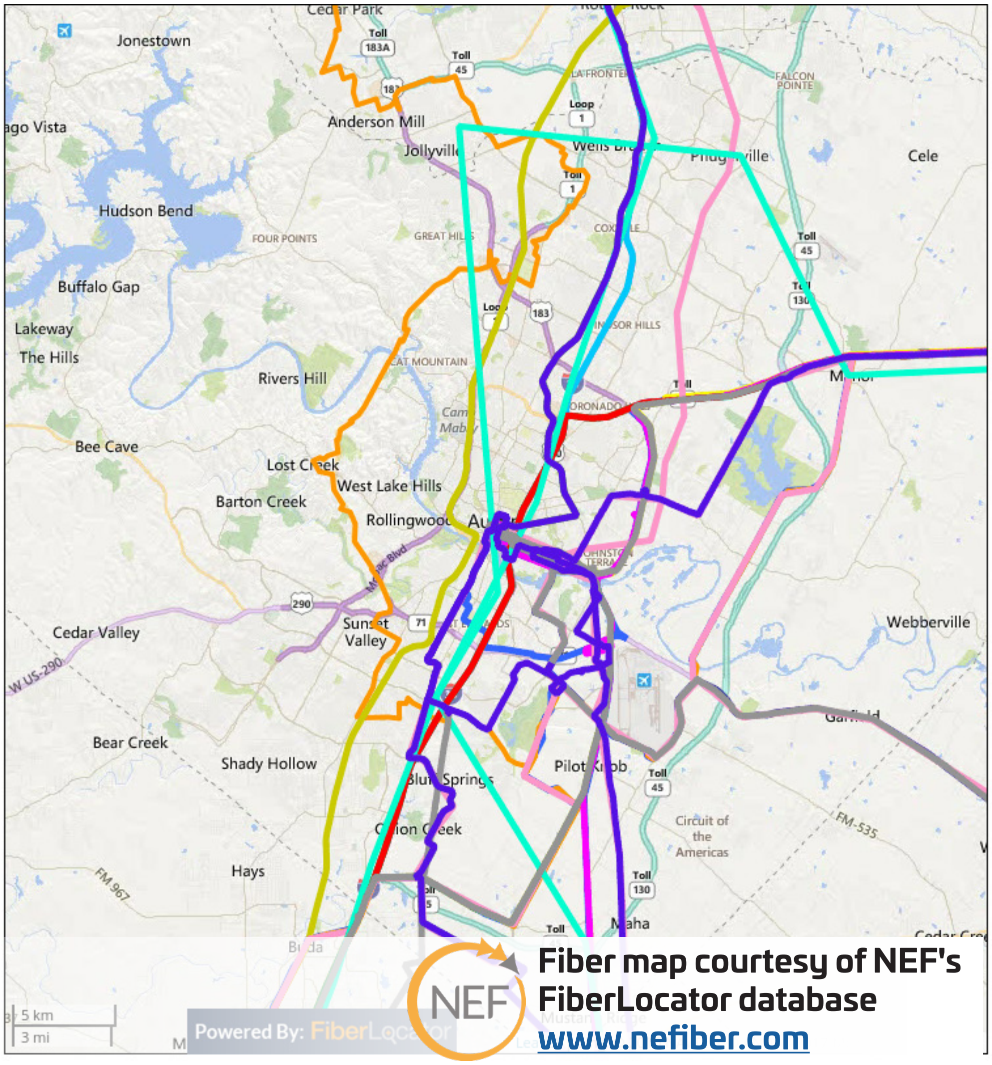
Metro Networks

- Alpheus
- CenturyLink Metro
- CenturyLink Metro Leased
- Consolidated Communications
- Fiberlight
- Fibernet Direct
- GVTC
- Grande
- Level3 Metro
- Telwest
- Texas Lone Star Network
- Time Warner Cable
- Windstream
- XO Communications
- Zayo Metro
- Zayo Planned Routes

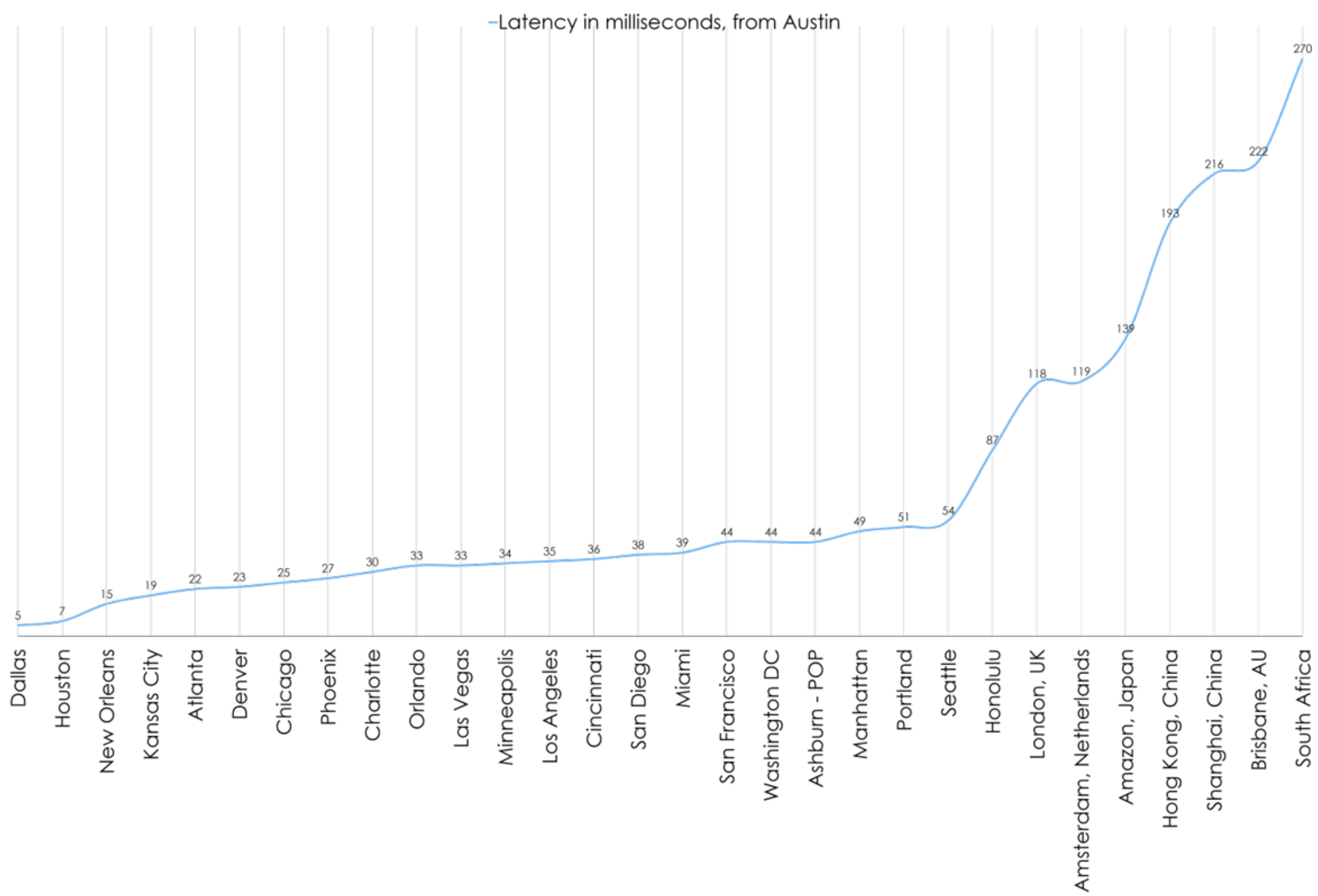


20 Mile Metro Networks





Latency in milliseconds, from Austin



*source: twtelecom.com on 6/30/2014. International data from dotcom-monitor.com, accessed 7/18/2014.

Local Tax Incentives

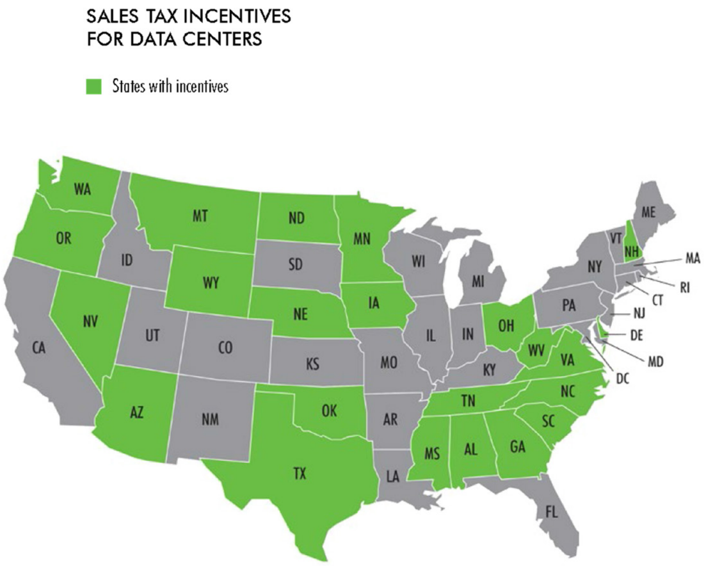
Sales and use taxes, property taxes, and real estate taxes all play a role in the total operating costs of data centers. Some states, however, offer incentives that lower the operating cost, or Total Cost of Occupancy (TCO) for both data center developers and clients installing infrastructure within these facilities. Site Selection is typically based on four primary drivers:

Power: Cost per kWh, carbon footprint, fuel mix, and infrastructure

Telecom: Fiber Providers, Latency

Geography: Proximity to headquarters, population size, labor force, water

Climate: Environmental risk (i.e. hurricanes, tornadoes, earthquakes, etc), free cooling



Sales & Property Taxes

The Texas Legislature passed a data center incentive program in 2013. The program provides a 100% exemption of sales tax on computer equipment, mechanical, & electrical equipment, cooling systems, power infrastructure, electricity, backup fuel, and software.

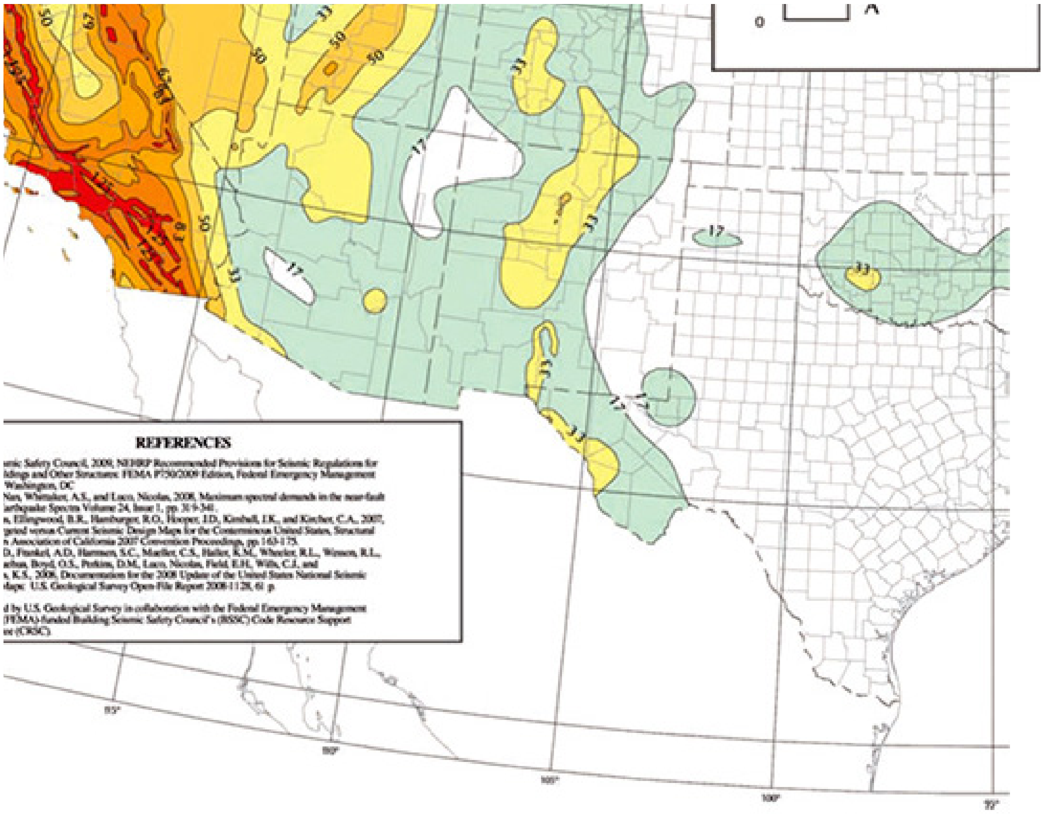
Qualifying facilities are required to invest $200 million total Capital over 5 years, have 100,000 sqft of gross building area, create no fewer than 20 new jobs, and pay at least 120 percent of the country average in wages. To make the 15 year abatement requires an investment of more than $250 million.

*source: Lenio, John and Lynch, Patrick, "Impact of Taxes & Incentives on Data Center Incentives," CBRE, July 2013.

Regional Earthquake Risk

Moderate Earthquake Risk

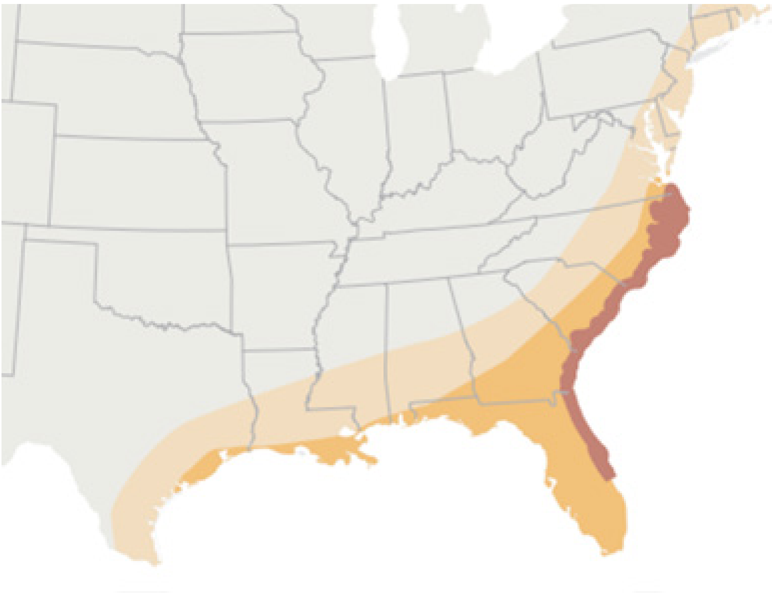
SDC	Earthquake hazard
A	Very small probability of experiencing damaging earthquake effects
B	Could experience shaking of moderate intensity
C	Could Experience Strong Shaking
D0	Could experience very strong shaking (the darker the color the stronger the shaking)
D1	
D2	
E	Near major active faults capable of producing the most intense shaking



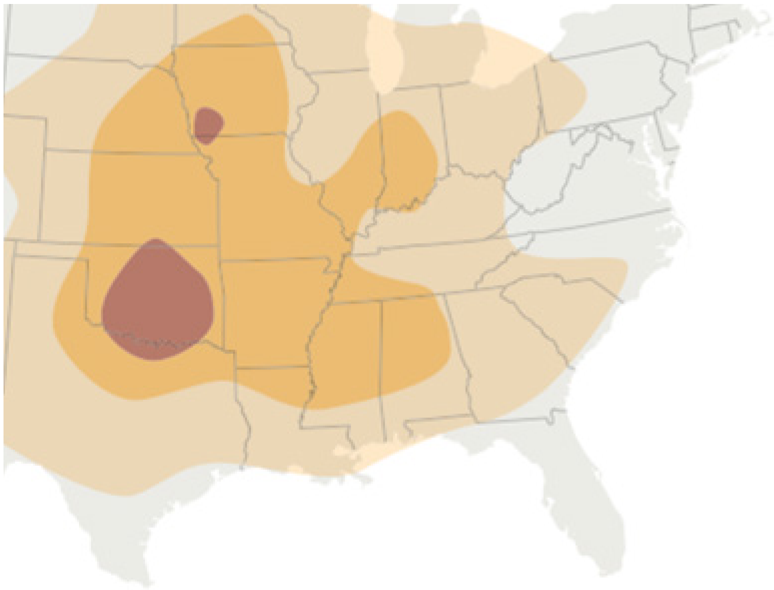
*source: FEMA Earthquake Hazard Maps, http://www.fema.gov/earthquake/earthquake-hazard-maps#1. Accessed July 11, 2014.

Regional Hurricane Risk

Moderate Hurricane Risk



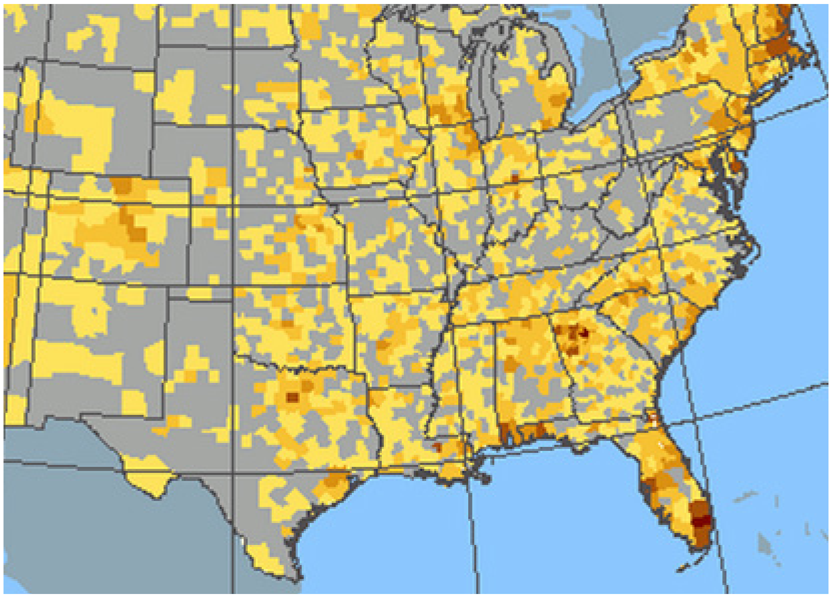
Moderate Tornado Risk



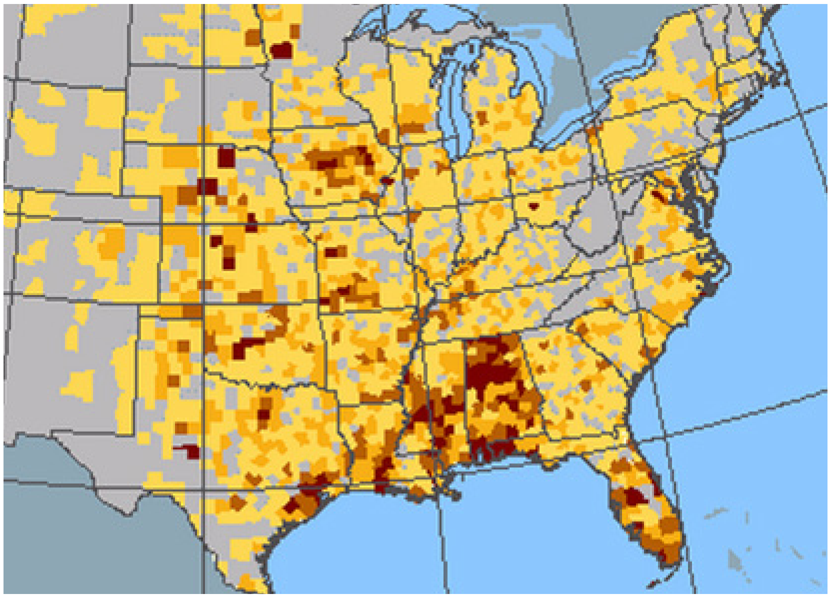
*source: nationalatlas.gov data range = 2001-2009 and Matthew Erickson, Joe Burgess, and Bill Marsh of The New York Times, April 30, 2011. Accessed online

Regional Thunderstorm Risk

High Lightning Risk



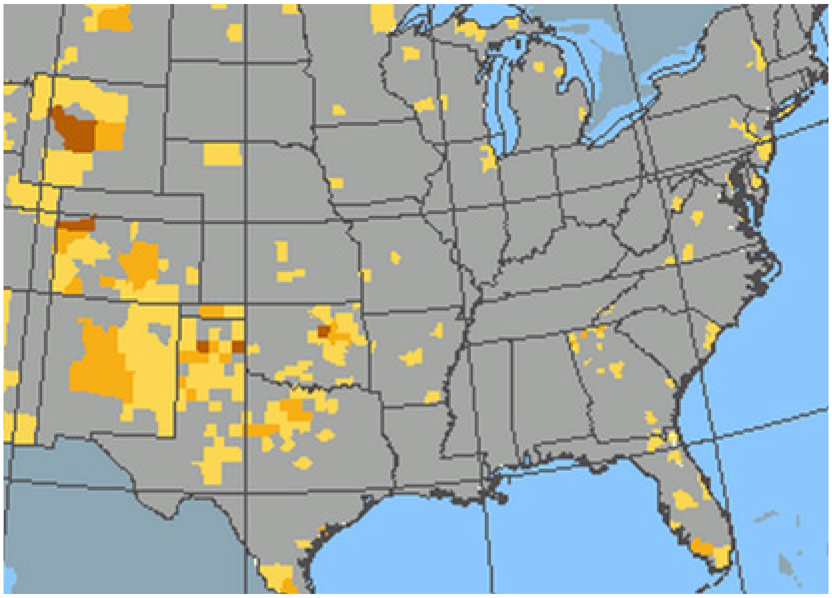
High Thunderstorm Risk



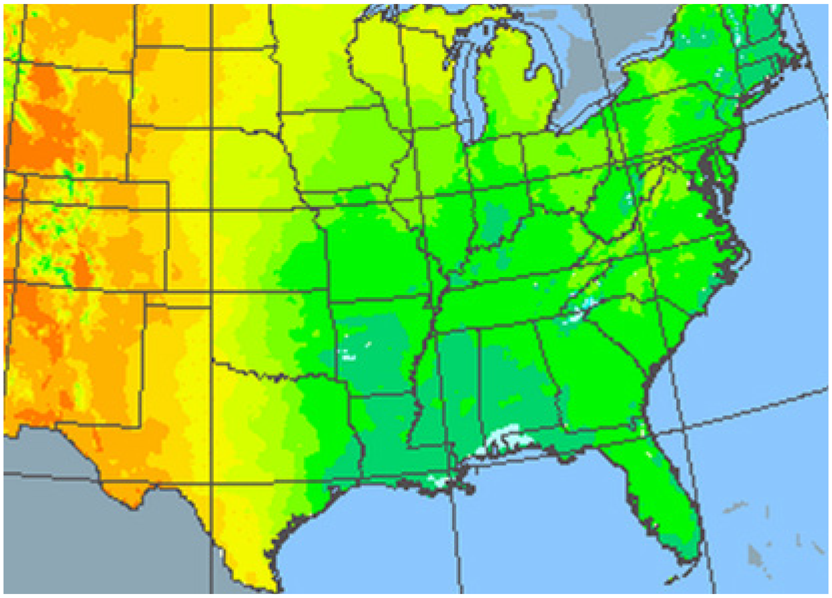
*source: nationalatlas.gov data range = 2001-2009 and nationalatlas.gov data range = 2001-2009

Regional Wildfire Risk

Low Wildfire Risk



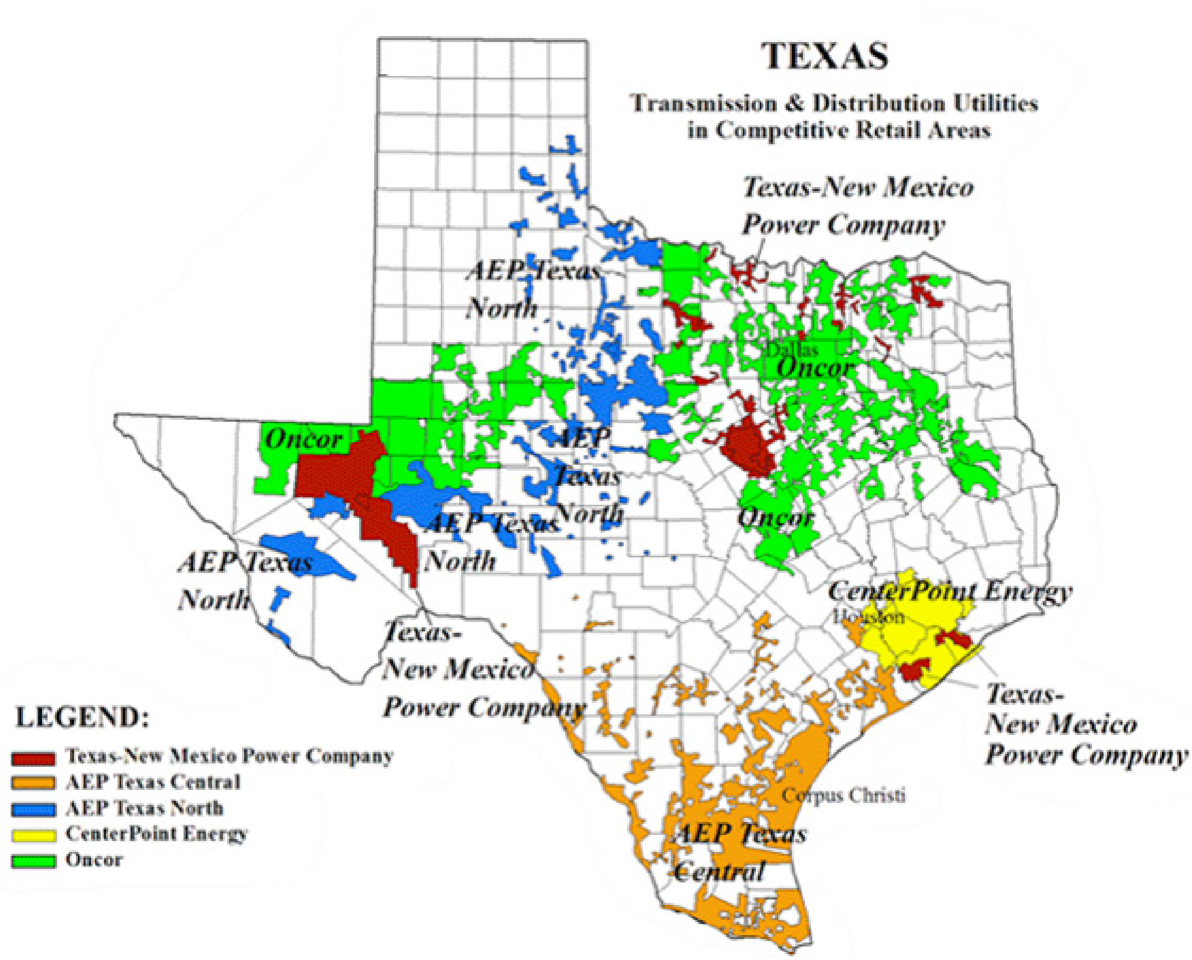
High Precipitation



*source: Matthew Erickson, Joe Burgess, and Bill Marsh of The New York Times, April 30, 2011. Accessed online, nationalatlas.gov data range = 2001-2009

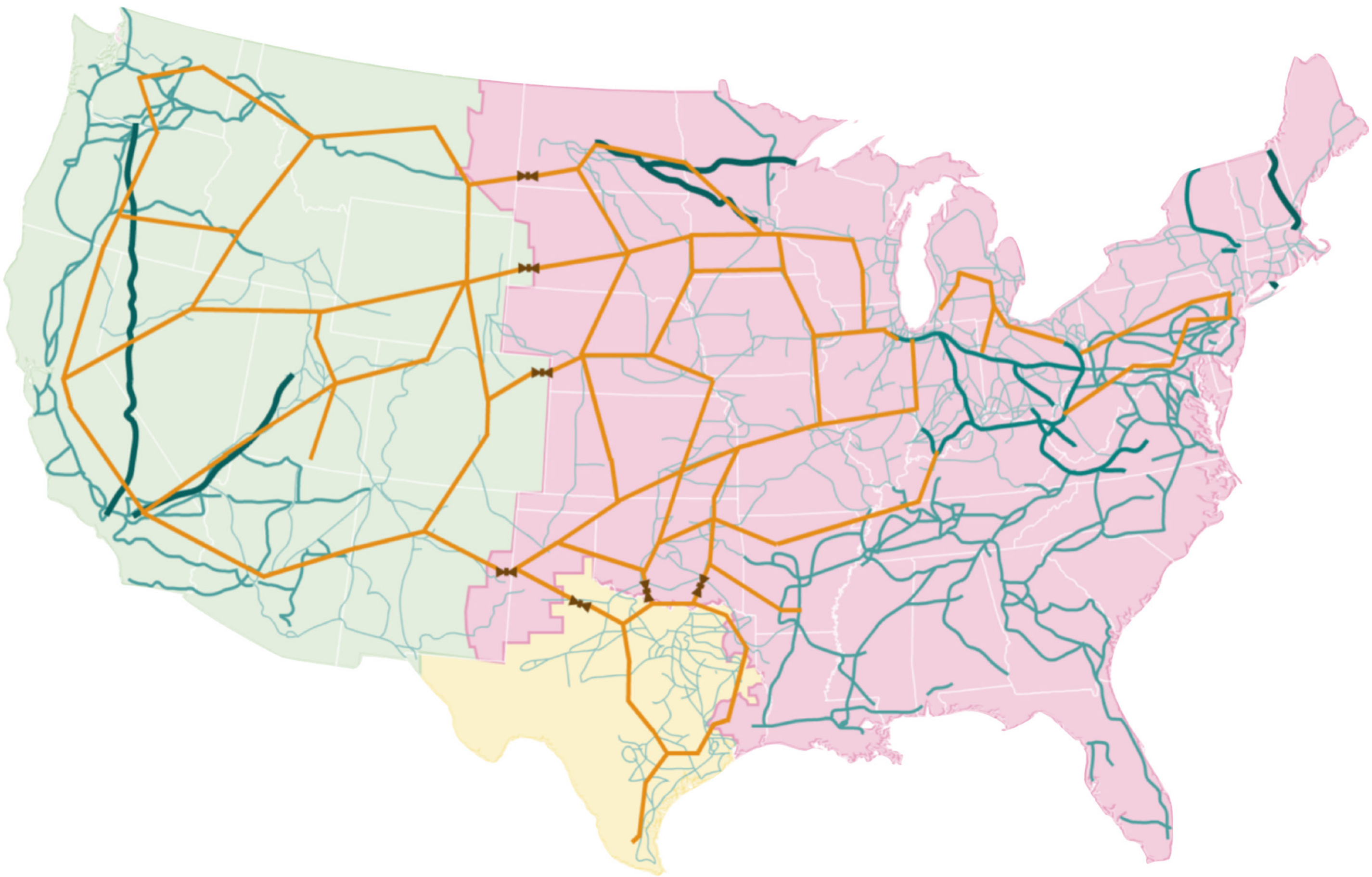
Regional Utility Service Map

Texas Energy Service Map Area



*source: http://www.opuc.texas.gov/ERCOT.html, accessed August 20, 2014.

National Power Connections



EXISTING LINES

345-499 kV

500-699 kV

700-799 kV

1,000 kV (DC)

PROPOSED LINES

New 765 kV

AC-DC-AC Links

INTERCONNECTIONS

Major sectors of the U.S. electrical grid

Eastern

Western

Texas (ERCOT)

*source: www.npr.org/2009/04/24/110997398/visu alizing-the-u-s-electric-grid Accessed June 30, 2014.

Fortune 500 Companies in Texas

AMR
Anadarko Petroleum
Apache
AT&T
Baker Hughes
Calpine
Cameron International
CC Media Holdings
Celanese
CenterPoint Energy
Commercial Metals
ConocoPhillips
Dean Foods
Dell Computer
Dr Pepper Snapple Group
El Paso Corp.
Enbridge Energy Partners
Energy Future Holdings
Energy Transfer Equity
Enterprise Products Partnets
EOG Resources
Exxon Mobil
FMC Technologies
GameStop
Group 1 Automotive
Halliburton
Holly
J.C. Penney
KBR
Kimberly-Clark
Kinder Morgan
Marathon Oil
Metro PCS Communications
MRC Global
National Oilwell Varco
Nustar Energy
Phillips 66
Plains All American Pipeline
Quanta Services, Inc.
Southwest Airlines
Spectra Energy
Susser Holdings
Sysco
Targa Resources
Tenet Healthcare
Tesoro Petroleum
Texas Instruments
United Services Automobile Association
Valero Energy
Waste Management
Western Refining
Whole Foods Market

*source: http://www.buyandhold.com/bh/en/research/states/NY.html

Public Company Comparisons

Stock (Ticker)	Ticker	Stock Price	Stock Perf Since YE15	Market Cap. (Mil.)	Firm Value (Mil)	2016E Revs (Mil.)
Cloud Infrastructure Cyrus One (CONE)	CONE	$52.4	40%	3,437	4,524	521
CoreSite Realty (COR)	COR	$82.6	46%	3,910	4,409	397
Digital Realty Trust	DLR	$102.1	35%	14,158	20,017	2,081
DuPont Fabros (DFT)	DFT	$45.9	55%	3,761	5,279	521
Equinix (EQIX)	EQIX	$371.0	23%	26,104	32,111	3,615
InterXion Holding (INXN)	INXN	$38.3	27%	2,703	3,243	478
Landmark Infrastructure	LMRK	$15.5	6%	1,269	1,497	43
QTS Realty Trust (QTS)	QTS	$54.7	21%	2,322	3,132	389
Zayo (ZAYO)	ZAYO	$27.9	5%	6,782	10,663	2,065
S&P 500 (Cons. Ests.)	SP50	$2,112.0	3%			

Public Company Comparisons

Stock (Ticker)	Ticker	Firm Value to '16e EBITDA (Consoli-tated)	Firm Value to '16e EBITDA (Multipli-er)	16e FCF / AFFO Yield	16e Net Debt / EBITDA	Div. Yield %
Cloud Infrastructure Cyrus One (CONE)	CONE	272	16.6x	4.9%	4.0x	2.4%
CoreSite Realty (COR)	COR	206	21.4x	3.8%	1.9x	0.0%
Digital Realty Trust	DLRt	1,185	16.9x	4.7%	4.9x	3.3%
DuPont Fabros (DFT)	DFT	323	16.3x	6.0%	3.6x	3.8%
Equinix (EQIX)	EQIX	1,653	19.4x	4.1%	3.6x	1.9%
InterXion Holding (INXN)	INXN	215	15.1x	-1.5%	2.5x	NA
Landmark Infrastructure	LMRK	38	39.7x	9.9%	6.1x	8.1%
QTS Realty Trust (QTS)	QTS	177	17.6x	4.6%	4.6x	2.3%
Zayo (ZAYO)	ZAYO	1,054	10.1x	8.3%	3.7x	0.0%
S&P 500 (Cons. Ests.	SP50					2.1%

2016 Market Trends

PRIMARY WHOLESALE COLOCATION MARKET SNAPSHOT

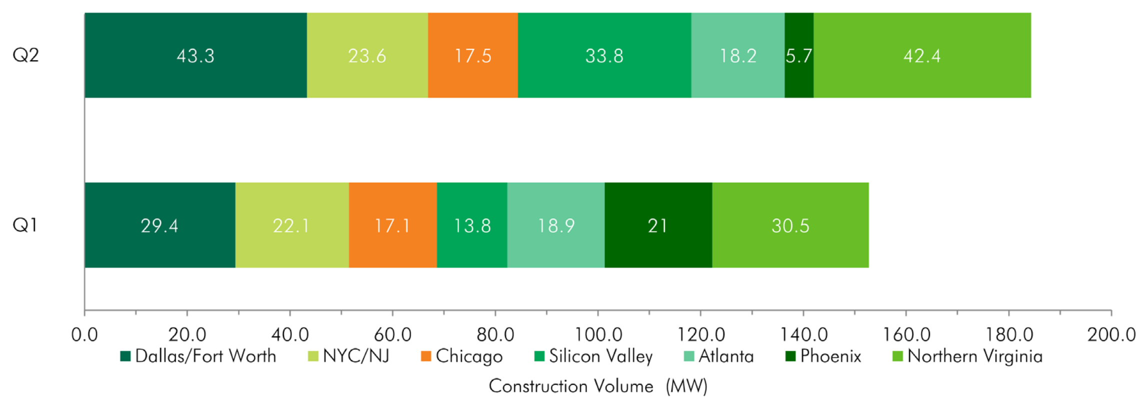
Market	Quarter	Inventory	Vacancy	Absorption	Rental Rates (kW/mo)*
Northern Virginia	Q1	417 MW (▲ 15.0 MW)	21.2 MW / 5.1% (▼ 24.1%)	20.8 MW (▲ 11.9 MW)	$130-$145
	Q2	421 MW (▲ 3.6 MW)	15.5 MW / 3.7% (▼ 27.7%)	9.4 MW (▼ 11.4 MW)	$130-$145
Phoenix	Q1	218 MW (▲ 5.0 MW)	4.1 MW / 1.87% (▼ 0.1%)	5.0 MW (▲ 2.8 MW)	$140-$160
	Q2	228 MW (▲ 10.0 MW)	4.1 MW / 1.87% (— 0.0%)	10.0 MW (▲ 5.0 MW)	$140-$160
Atlanta	Q1	127 MW (▲ 0.6 MW)	25.7 MW / 20.2% (▼ 2.4%)	0.7 MW (▼ 1.8 MW)	$125-$150
	Q2	127 MW (— 0.0 MW)	24.3 MW / 19.1% (▼ 5.2%)	1.4 MW (▲ 0.7 MW)	$135-$150
Silicon Valley	Q1	131 MW (▲ 14.9 MW)	16.1 MW / 12.3% (▼ 10.7%)	14.7 MW (▲ 11.7 MW)	$140-$150
	Q2	134 MW (▲ 3.6 MW)	15.8 MW / 11.7% (▼ 4.6%)	3.9 MW (▼ 10.8 MW)	$130-$150
NYC/NJ	Q1	134 MW (▲ 11.4 MW)	21.7 MW / 16.2% (▼ 0.5%)	10.1 MW (▲ 3.8 MW)	$145-$165**
	Q2	135 MW (▲ 1.5 MW)	22.2 MW / 16.5% (▲ 1.4%)	1.0 MW (▼ 9.2 MW)	$150-$170
Chicago	Q1	117 MW (▲ 2.4 MW)	3.4 MW / 2.9% (▼ 7.9%)	2.6 MW (▼ 1.6 MW)	$145-$165
	Q2	130 MW (▲ 13.0 MW)	10.9 MW / 8.40% (▲189.7%)	5.5 MW (▲ 2.8 MW)	$145-$165
Dallas/Fort Worth	Q1	131 MW (▲ 18.6 MW)	23.7 MW / 18.0% (▲ 68.1%)	7.0 MW (▼ 1.9 MW)	$125-$155
	Q2	132 MW (▲ 0.7 MW)	21.5 MW / 16.3% (▼ 9.6%)	2.8 MW (▼ 4.2 MW)	$125-$155

*Rental rates are quoted asking rates from providers for 500 kW. CBRE experiences that actual contract rates fall below these numbers.

Arrows reflect quarter-over-quarter changes.

**Quoted rates are outside of NYC proper. NYC (Manhattan) wholesale rates average $225-$300/kW/mo.

Q1-Q2 DATA CENTER CONSTRUCTION PIPELINE



90%

New data generated over past 2 years as a % of total of all data ever generated
-Expected to INCREASE year after year

2,500

Number of commercial colocation facilities within the USA
-Expected to INCREASE year after year

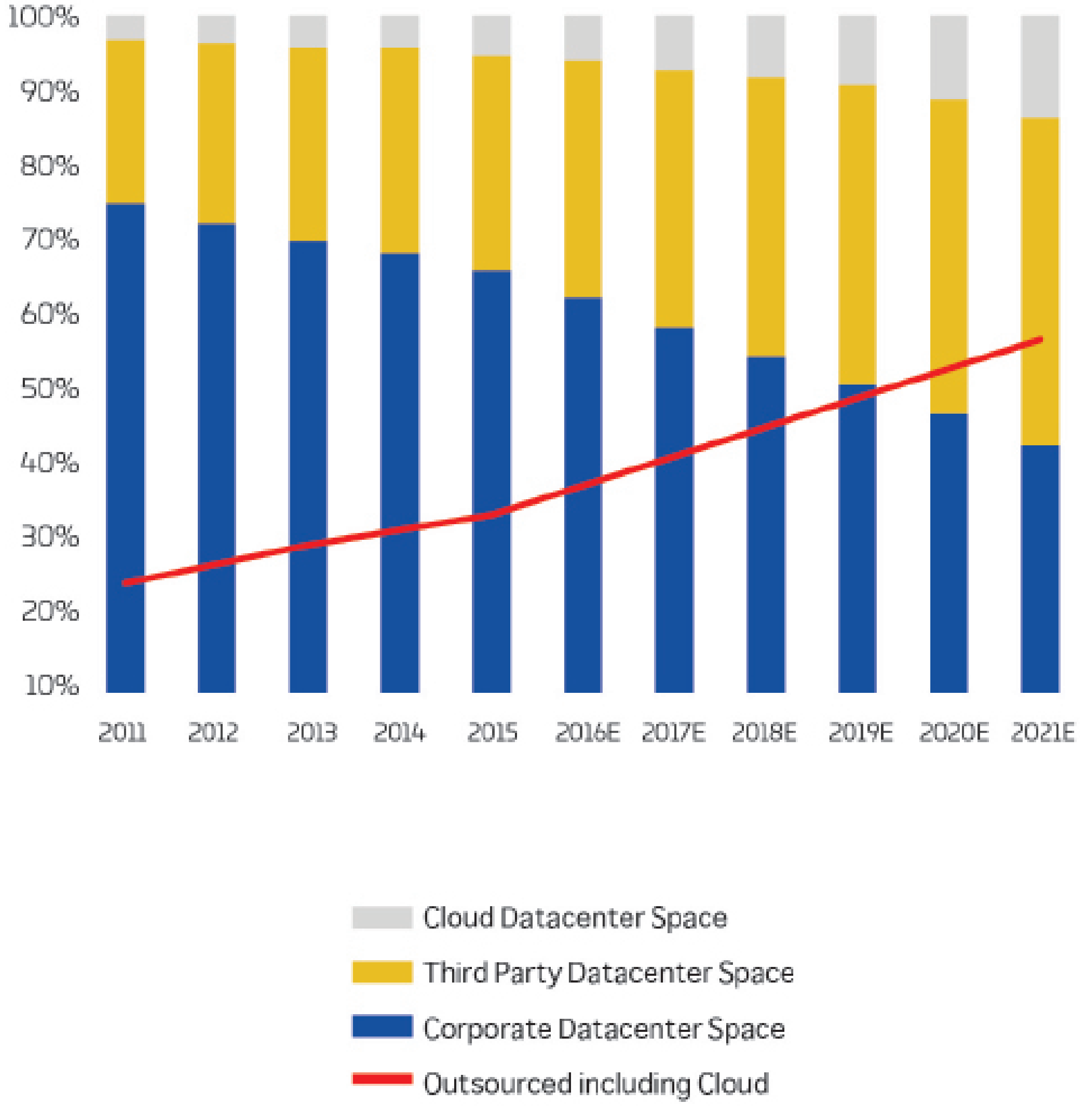
2,940,000

Number of corporate owned data centers in the USA*
-Expected to DECREASE year after year

611,400,000

Total data center sq. ft. within the USA*
-Expected to INCREASE year after year

Outsourcing Trends



Source: Oppenheimer & Co. Inc., Company Data

The Industry Playbook

If you were fluent in the language of the data center industry, how much more effective would you be?

"The book and bootcamp should be the de facto training for anyone who wishes to take themselves seriously in the industry."
-Richard Donaldson, eBay

"You will learn the essentials – there is no fluff in this material – and be better positioned to do your job."
-Bill Norton, IIX

What's in the book:

- Data center owner types
- Data center solution types
- Data center pricing and case studies
- Power configuration and distribution fundamentals
- Cooling fundamentals
- Contracts, audits, and compliance fundamentals

openspectruminc.com/playbook-download

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