Real Estate Issues in Data Center Transactions

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technology
may-rathon

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Introduction

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State of the Data Center Market

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State of the Data Center Market: Providers

- Internal – Legacy approach of owning and managing the entire infrastructure.
- Outsourcing – Full responsibility for infrastructure, personnel and applications provided to a third party.
- Co-location – dedicated physical space provided by a third party that also provides utility service and site security and the operating company installs and manages its equipment and applications.
- Cloud/Managed Care – obtaining computing, storage, and applications as a service from a third party over the Internet based on a service-level agreement.

State of the Data Center Market: Trends

- “Shadow IT” – operating units bypassing corporate IT
- Cap Ex/Op Ex Trade-offs
- CIO mind-set shift – from management to exploitation of IT
- Increased reliance on outsourcers and co-location providers; use of cloud providers for select applications
- Reclaiming physical space for other corporate uses
- Start-ups can quickly obtain world-class technology minimizing IT as competitive differentiator
- Migration to utility model

State of the Data Center Market: Drivers

- Virtualization driving higher power density requirements
- Legacy data centers often lack adequate power and water utilities to drive higher-density implementations
- New construction and new entrants
- Focus on operating efficiency:
  - Power costs
  - Proportion of power used to drive IT equipment vs. other uses (cooling, lighting, etc.)
  - Water usage
  - Innovation: free cooling; DC vs. AC
- Renewable energy sources and co-generation
- Flexibility to migrate to higher-density implementations

Legal Considerations in Data Center Transactions

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Legal Considerations in Data Center Transactions: Location and Development Issues

- Political Concerns: Different constituencies drive different agendas

Legal Considerations in Data Center Transactions: Location and Development Issues

- Utilities
  - Large consumption requirements to power and cool
  - Redundancy requirements
  - Interconnection agreements
    - *multiple layers of regulation*
  - Solar, co-gen and other self-supply options

Legal Considerations in Data Center Transactions: Location and Development Issues

- Security
  - Neighboring uses and traffic
  - Physical intrusion
  - Data privacy
  - 24/7/365 access

Legal Considerations in Data Center Transactions: Location and Development Issues

- Environmental Concerns
  - Rural vs. urban
  - Rooftop limitations
  - Air quality
  - Water permits
  - Noise
  - Risks presented by surrounding properties
  - Recycling and disposal of outdated electronics

Legal Considerations in Data Center Transactions: Location and Development Issues

- Title and Survey
  - "Routine" concerns
    - *Blanket utility no-build easements*
  - Access to power, water, steam
  - Flood zone and other special risks
  - Suitability for expansion

Legal Considerations in Data Center Transactions: Location and Development Issues

- Zoning
  - “Routine” diligence
  - Permitted uses – some codes not up to date
  - Multiple possible uses (including power generation and transmission)

Legal Considerations in Data Center Transactions: Leasing Concerns in Operation of a Data Center

- Lease vs. License
- Description of Leased/Licensed Space
  - Exclusive and nonexclusive rights
- Nuances of Assignment
  - Sublease/sublicensing
  - Sharing equipment/co-location
- Power Expense – a Key Consideration

Legal Considerations in Data Center Transactions: Leasing Concerns in Operation of a Data Center

- Assurance Relating to:
  - Security
  - Interior environmental controls (cooling, humidity)
  - Redundant systems
- Ability to Choose Telecom Providers
- Tenant/Licensee Alterations
  - Removal obligations at end of term
- Defining Fair Market Rent (or Fees) on Renewal
  - Related peculiarities of nature of tenancy/license

Legal Considerations in Data Center Transactions: Leasing Concerns in Operation of a Data Center

- Tenant/Licensee Self-Help Rights
  - Express termination and release rights
    - *Site is mission critical*
- Other Leniency Uncommon in Office or Industrial Leasing
  - Special treatment of casualty and condemnation
- Landlord Relocation Rights
- Capping Landlord's and Tenant's Liabilities

Energy and Smart Grid Considerations

Viridity Energy - Recognized Leader in Smart Grid Technology

Key Company Facts

Founded in 2008 by **well-known industry executives**

Experienced Team:

- Experienced utility and power market executives
- Technology innovators
- Regulatory policy and affairs experts

Recipient of multiple **industry awards and grants**

Unparalleled Solutions

Integrated energy management from Demand Response to Dynamic Load Management and Microgrids

Patent-pending software platform
optimizes and integrates energy assets such as controllable loads, cogeneration, renewables, and energy storage systems

Network Operating Center
supports customer participation in wholesale power markets

Types of Clients

Industrial

Commercial

Institutional

Utilities

Data Centers

Military

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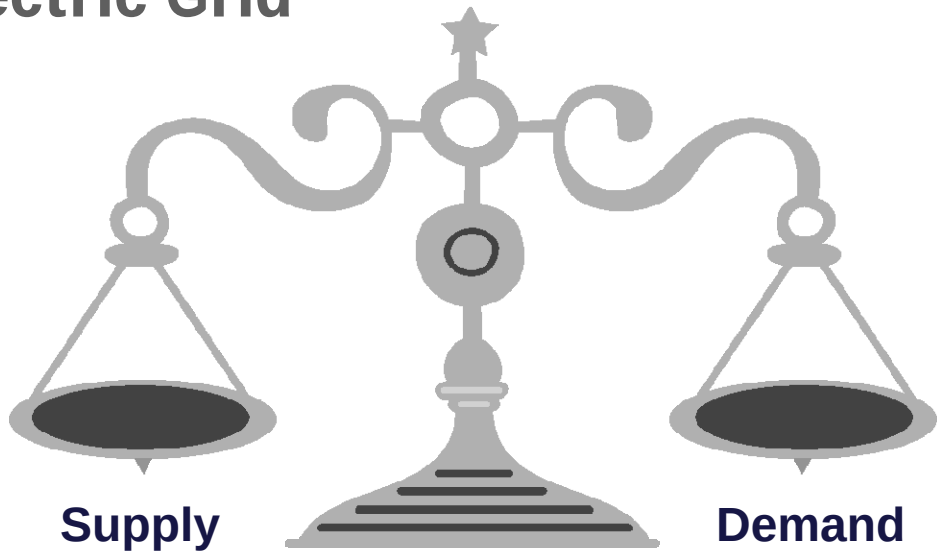
Energy and Smart Grid Considerations

Large Energy Users Have Opportunity to Enhance Reliability of Electric Grid

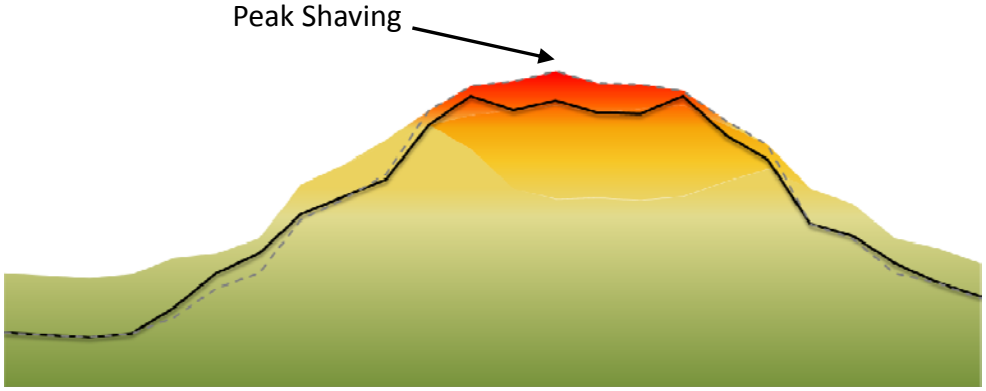
- Supply and demand of electricity must constantly and almost instantaneously be in balance.

- Historically, an increase in power demand has been met by generators producing electricity to supply into the grid.

- New federal regulations allow large electricity consumers to get paid for reducing demand – as though they were injecting supply.

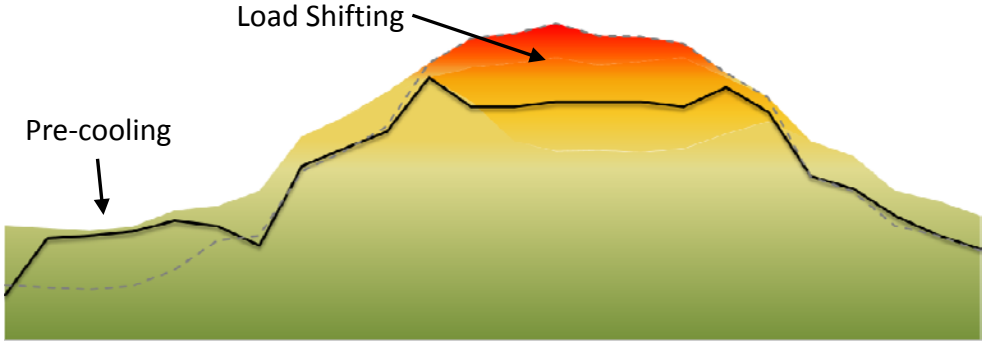


Demand Response
Multiple Markets = Customer's Choice



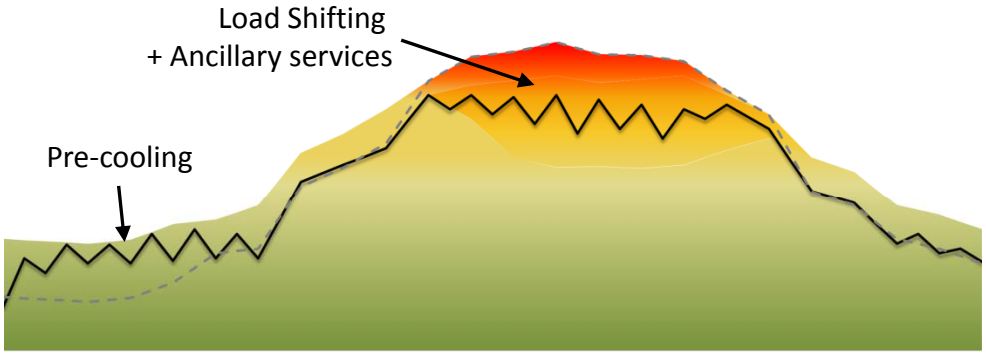
Capacity Programs

- Low-frequency, mandatory response
- Easy to implement
- A reactive way to earn additional revenue stream



Economic Programs

- High-frequency, voluntary response program
- Daily price settlement
- A proactive way to earn additional revenue



Ancillary Programs (Sync-Reserve & Regulation)

- High-frequency, high-payment, short-notice program
- Requires automated response due to short notice times and duration; energy assets such as generators or battery storage can further enhance your ability to participate

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Take Your Equipment and Create "Virtual Energy," Which Earns You Revenue

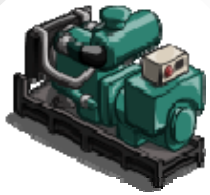
Renewables

Mfg. Flexibility

Compressors

If you shift your energy use, the same amount is freed up to be used on the electricity market. You can become a provider of **"Virtual Power,"** and power utilities/grids will pay you to help them reduce peak loads and **balance the grid.**

Storage



CoGen

Viridity Energy works with large energy users to optimize their planning to take advantage of energy prices. Customers avoid high usage during high priced hours and also gain revenues from any energy reduction they achieve.

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NY CLE Code

C1626.35

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Questions?

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