

## Smart Companies Utilize Integrated Energy Solutions

*Integrated Energy Planning White Paper and  
Provider Due Dilligence Checklist*

*Demand  
Response  
& Virtual  
Generation*

**360°**  
*Energy Integration*

*Commodity  
Supply*

*Energy  
Services*

*Project  
Funding  
Alternatives*

*Sustainable  
“Green”  
Energy*

Businesses face a number of obstacles in their quest to reduce and manage energy costs. Chief among them, according to a 2012 study by the Institute for Building Efficiency, is a lack of funding for new energy facilities and equipment. Other reasons include insufficient payback or ROI, lack of technical expertise and uncertainty regarding savings and performance.

These obstacles can be overcome with a comprehensive approach offered by an experienced Integrated Energy Solutions Provider.



## **Avoid a Piecemeal Approach**

Due to the many hurdles in achieving energy cost reduction, many companies take a piecemeal approach to energy management solutions. They jump to retrofit HVAC one year, lighting the next, perhaps address procurement strategies the year after.

Approaching an energy solution in a piecemeal fashion with multiple consultants, vendors and in-house teams can result in decision-making based on incomplete data, systems that are incompatible, high costs and maintenance crews being pushed into unfamiliar roles they have not been trained to fill. As well, opportunities to optimize savings by combining energy management strategies – procurement bundled with efficiency measures and demand response programs, for example – may be overlooked.

But if upgrades and new systems are planned intelligently, using a 360-degree approach that takes into consideration all aspects of the energy supply and demand equation, the company can overcome its obstacles and make smarter energy decisions.

## **What Smart Businesses are Doing**

### **Procurement Strategies**

Because every business uses energy differently, it's important for companies to search for an Energy Solutions Provider that can develop a solution that fits the individual needs of a company. A top provider will analyze usage patterns, business objectives and risk tolerance – as well as the energy market - to deliver a solution that meets your needs and keeps your bottom line in focus.

In addition, with an Integrated Energy Solutions Provider, the costs of energy efficiency measures can be factored into customers' energy supply contract. This approach enables customers to minimize up-front capital costs for efficiency projects.

As a bare minimum, look for an Energy Solutions Provider with experience with the following energy supply plans:

### Fixed

Provides predictability with a fixed price guaranteed for a given term.



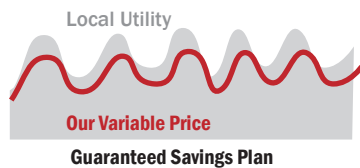
### Block & Index

Allows a company to lock-in a portion of its load at a fixed price. The remainder floats with the market.



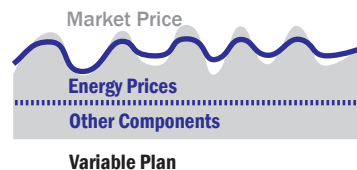
### Guaranteed Savings

Provides a guaranteed discount off utility bills.



### Variable

Energy price varies from month to month, as the energy price floats with prevailing market rates. Other price components (ancillary and capacity) are fixed.



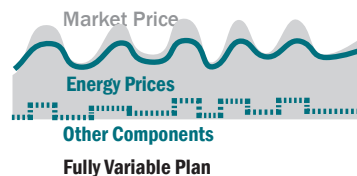
### Environmental

Look for the ability to use renewable energy or Renewable Energy Credits (RECs) for all or a portion of your portfolio.



### Fully Variable

Price varies from month to month, as all components of the price (energy, ancillary, and capacity) float with the market.





## Demand Response

A comprehensive and fully integrated energy solution that cuts overall energy costs will include a Demand Response program.

“Demand Response brings the two sides of the house together,” says Michael Perna, Vice President of Marketing and Business Development at ConEdison Solutions. “Both energy supply and demand expertise. With an infrastructure in place to accommodate load management, large businesses can reduce their energy consumption during peak times. When they do, we pay them for it.”

Demand Response offers customers the opportunity to participate in independent system operator (ISO)/Retail Transmission Organization (RTO) sponsored programs and earn money by committing to reduce load at times of electricity grid emergencies or high prices..

Examining both potential and actual peak load reduction, the FERC found last year that the reported potential peak reduction is 66.4 megawatts (MW), or about 9.2% of U.S. peak demand and an increase of 25% since the same survey was conducted in 2010.

Because of the large positive effect Demand Response has to energy providers, Demand Response participants are paid a capacity payment on the basis of their commitment. As a result, savings to energy bills can be quite large.

Top-tier Energy Services Providers are experienced at navigating the requirements of each ISO/RTO including NYISO, ISO-NE, PJM and ERCOT. These companies can manage the entire process for you from start to finish. They will evaluate your facility and work with you to establish your level of energy reduction commitment. They will notify you of a demand response event and schedule, monitor, and verify your participation.

## Energy Efficiency

Upgraded, energy-efficient systems deliver long-term energy reductions and cost savings that benefit your bottom line.

Energy Performance Contracting (EPC) is a contract program that enables companies to replace aging, inefficient, or high-maintenance equipment with new energy-efficient equipment with little or no capital outlay. Energy usage and costs are reduced, operating practices are improved, environmental impact is reduced, and new maintenance and measurement procedures are integrated.

Find an Energy Solutions Provider who will design, construct, monitor, measure and help maintain your EPC energy improvements, making it an easy-to-manage turn-key program. The Provider should guarantee that your annual energy savings will be equal to or greater than the overall cost to finance the project.

EPC can mitigate sticker shock and increase overall affordability, comprehensiveness and ROI.





## Integrated Energy Solutions Providers

Clearly, the above can become complicated for companies.

To attain a truly holistic energy management program that accounts for commodity supply procurement options, Demand Response, energy efficiency measures, , and automated energy-use programs with a minimum in capital outlays, companies require a mature, experienced Integrated Energy Solutions Provider.

Integrated Energy Solutions Providers can deliver a “no headache,” turnkey yet personalized solution that reduces energy use, provides a hedge against rising energy costs, and makes energy management less resource intensive.

The integrated energy solutions provided by Energy Services Providers avoid the pitfalls of a piecemeal approach. Companies also find that an end-to-end, integrated solution from a single, highly sophisticated Energy Services Provider delivers the most consistent and cost-effective means for

controlling and forecasting their energy costs.

“Many vendors can deliver data from an energy audit or a dashboard,” says Cara Olmsted, Director of Marketing and Business Development at ConEdison Solutions. “But taking that data and developing strategies of how to best improve a company’s energy demand curve through equipment utilization, energy pricing curves, and utility rates is highly sophisticated. That’s where long-term savings are realized.”

For example, after an audit and walk-through, a vendor may recommend lighting changes to lower costs. That’s all well and good, but comprehensive energy auditing and monitoring from an Integrated Energy Solutions Provider will recommend that and a myriad of other considerations and will also develop automated scripts for equipment and operations, resulting in flattened demand and energy savings that a piecemeal approach cannot equal.

When automation (an example of automation and automated scripts may include pre-cooling or pre-heating buildings during off-peak hours based on historical data) and remote management and monitoring are combined with other tools, such as onsite energy generation and demand response, high-use spikes tend to flatten out. This allows an enterprise to purchase electricity during cheaper, off-peak hours and to sell generated power back to service providers when that energy carries the highest premium. That’s an integrated energy solution.

When it comes to managing energy, it’s all connected. With an Integrated Energy Solutions Provider you can rest assured that no avenue of potential savings is being left unexplored.

## How Integrated Energy Solutions Providers Assess, Plan and Implement Integrated Energy Plans

If you make the decision to partner with an Integrated Energy Solutions Provider, you can expect a streamlined, turnkey process that results in an Integrated Energy Plan.

While there are a plethora of energy vendors and consultants, there are only a select number of Integrated Energy Solutions Providers that can deliver the comprehensive approach described below.

Generally, companies can expect a three-step Integrated Energy Solution approach:

### 1. Assessment

During the assessment phase, raw data on energy consumption and the ways in which buildings and equipment are using that energy is gathered. With this information, Integrated Energy Solutions Providers can make more realistic and detailed plans for modifying, replacing, or managing equipment to flatten the demand curve. The typical assessment—from site walk-through and energy usage audit— may take a few weeks. At multi-site and multi-facility enterprises and institutions, data should be monitored and collected from all facilities and then each building analyzed for how it's utilizing that energy.

### 2. Planning

During the planning stage, Integrated Energy Solutions Providers analyze the data from each building and system, and develop strategies that improve its demand curve. Data scripts factor in budgetary, workload, staffing and a multitude of other variables to develop a company-specific Integrated Energy Plan that provides the best return on investment.

### 3. Implementation

Approved integrated energy plans are implemented in stages with progress monitored along the way to ensure that desired and predicted results are achieved with minimal business disruption.

Integrated Energy Solutions Provider rely on top engineers and sophisticated smart-building technology and network operating centers (NOCs) to implement integrated energy plans. Instead of relying on multiple vendors and onsite personnel to manage the energy systems, remote control and usage analysis at the provider NOC can automatically step in and make adjustments that trained maintenance crews would find difficult to accomplish.

With the right Integrated Energy Solutions Provider, companies are relieved of the burden of managing and second guessing their energy use, and are assured of a more finely-tuned demand curve that consistently saves money.

## Integrated Energy Solutions Provider Due Diligence Checklist

Integrated Energy Solutions Providers can deliver the one-stop, turnkey solution companies need - but not all are created equal. Companies must make certain that these providers are truly capable of delivering the greatest payback from their engagement.

Here is a checklist that can help you evaluate Integrated Energy Solutions Providers. An Integrated Energy Solutions Provider should offer all of these services.

### Does the Provider...

- Offer a complete end-to-end service that includes initial assessment, planning and implementation?
- Assist in defining energy objectives?
- Include a complete, full energy audit of all facilities?
- Analyze energy usage trends to identify any potential daily, weekly, seasonal, business cycle, or facilities patterns for optimization?
- Take into account the current energy market, probable future energy market, load profile and company risk tolerance in order to develop the most cost-effective and risk appropriate energy procurement plan?
- Assess opportunities to replace or modify aging, high-maintenance heating, air conditioning, and lighting equipment with new, energy-efficient systems?
- Review all regulations and tariffs that may affect operations and energy needs?
- Offer flexible financing options, low-finance rate equipment qualifications, bulk purchasing discounts and rebate application support?
- Cost-effectively modify existing enterprise electrical and other energy systems for peak efficiency?
- Use network services and remote energy monitoring and management systems?
- Minimize business disruption during implementation?
- Empower a company with the programs and tools – such as Demand Response and Virtual Generation – that control energy budgets and capitalize on energy assets?
- Monitor facilities after engagement to measure results and make refinements?
- Have a track record and the data to prove successes?
- Show where waste had occurred and compare pre-audit performance and post implementation upgrade results immediately?

## Summary

An integrated energy solution is the best way to increase the ROI of energy efficient equipment and cut energy costs. The biggest factor in the success of a program is choosing an Integrated Energy Solutions Provider with an effective end-to-end approach, a winning track record, deep expertise and strong existing customer base.

ConEdison Solutions is a leading energy services company that provides competitive power supply, renewable energy, sustainability services, cost-effective energy efficiency solutions, and performance contracting services for commercial, industrial, residential and government customers, including universities, public school districts, and hospitals nationwide. Offering innovative products, financial stability, and a commitment to customer service, the company is based in Valhalla, New York, with offices in Burlington, Massachusetts; Cherry Hill, New Jersey; Chicago, Illinois; Falls Church, Virginia; Houston, Texas; Tampa, Florida; and Overland Park, Kansas. The firm's dedicated team of energy professionals delivers a broad range of energy solutions. ConEdison Solutions offers programs and services designed to help customers achieve their individual energy objectives and is accredited as an Energy Services Provider (ESP) by the National Association of Energy Service Companies (NAESCO).


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## For More Information

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 Download the 360 Integrated Solutions brochure:  
[http://www.conedsolutions.com/Libraries/all\\_pdfs/360EnergyIntegrationBrochure.sflb.ashx](http://www.conedsolutions.com/Libraries/all_pdfs/360EnergyIntegrationBrochure.sflb.ashx)

 <http://www.conedsolutions.com/LargeBusiness/Quote.aspx>

## Providing integrated energy solutions that include:

- Energy Supply Pricing Plans
- Sustainable Energy & Services
- Energy Savings Performance Contracting
- Design-Build Construction Services

**for commercial, industrial, federal, state and municipal government, healthcare and education markets.**

## States of Operation

- **C&I Electric Commodity:**  
CT, DE, IL, MD, MA, ME, NH, NJ, NY, OH, PA, RI, TX, and DC
- **C&I Gas Commodity:**  
NJ and NY
- **Residential Electric Commodity:**  
CT, IL, MD, MA, NY, PA, and DC
- In regions where energy is not directly supplied by ConEdison Solutions (CES), we will assist in developing and evaluating RFPs to purchase energy
- **Energy Services:** Nationwide

## Key Indicators

- **Peak Load Served:**  
Approximately 4,000 MW
- **Megawatt Hour Volume:**  
Approximately 12 million MWh
- **Annual Revenue:**  
Over \$1 billion
- **Residential/Mass Market Accounts:**  
Over 270,000

