



IEA: Flexibility & Energy Efficiency

24/10/2018 Basic Approach & Lessons Learned

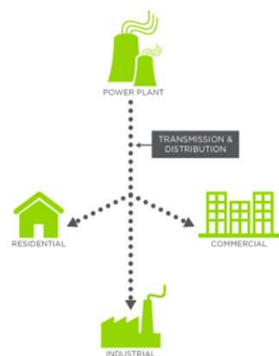
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Why combine Efficiency & Flexibility?

The confluence of technical, economic and regulatory factors

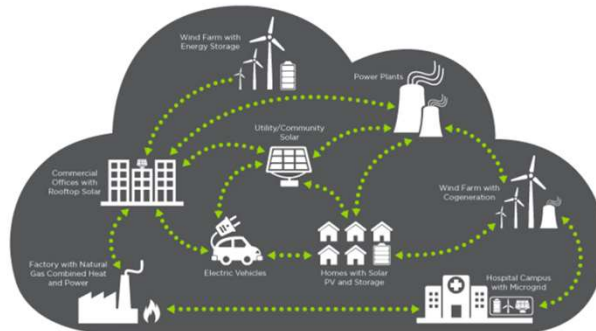


TODAY: ONE-WAY POWER SYSTEM



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EMERGING: THE ENERGY CLOUD



(Source: Navigant Consulting)

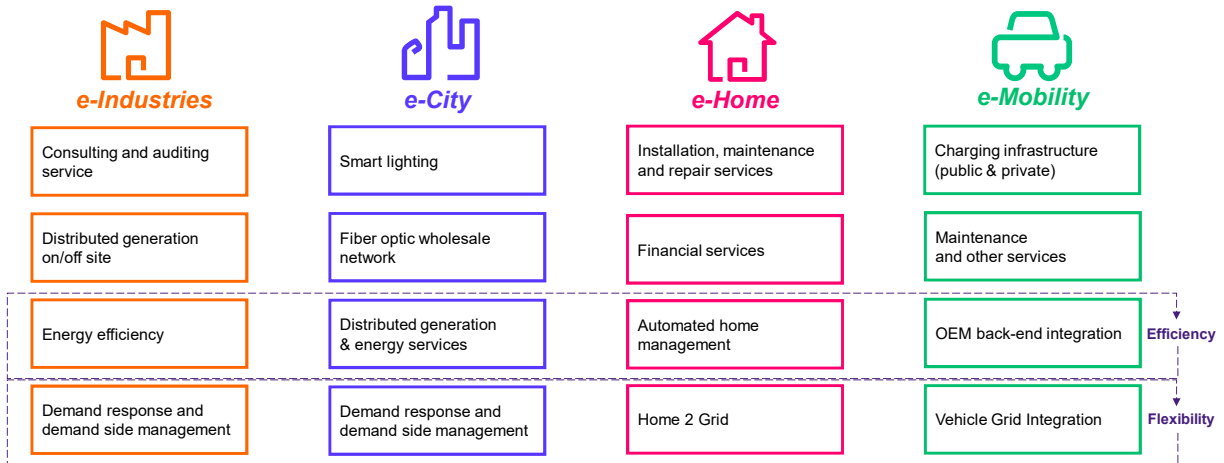
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Areas of Focus

4 areas to bring together all aspects of the energy lifecycle

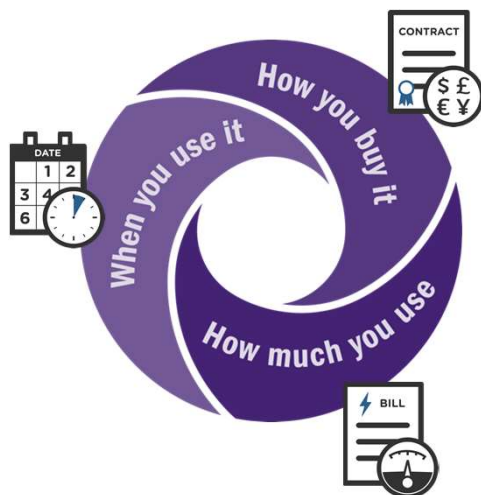
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The Energy Lifecycle

Considering from the end user perspective

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- Procurement
- Utility bill validation
- M&V
- Projects
- Curtailment
- Shift onto resilience

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Energy Efficiency & Flexibility

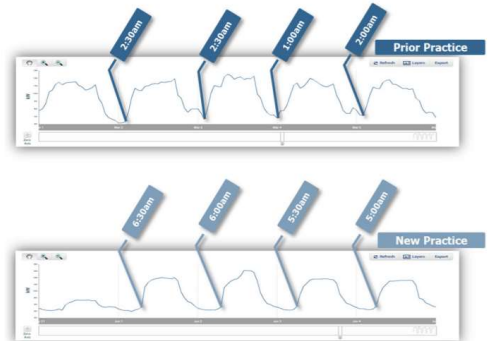
Focus on Commercial Real Estate



Beacon Capital Partners: 45 sites.

(Boston, New York, Washington, D.C., San Francisco, Los Angeles, San Diego, Seattle, Chicago, and Denver)

- Flexibility: Demand response & peak demand reduction.
- M&V: Identification of EE projects.
 - Energy Coasting
 - Variable Speed drives



By delaying start up of the HVAC system by a few hours every day, Beacon was able to realize \$30,000 in annual savings at one property.

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Energy Efficiency & Flexibility

Ongoing project at Dublin Airport



- Providing frequency response and capacity
- Ongoing efficiency projects:
 - Lighting upgrades
 - BMS enhancements
- Supporting airport to explore operational savings potential through microgrid deployment

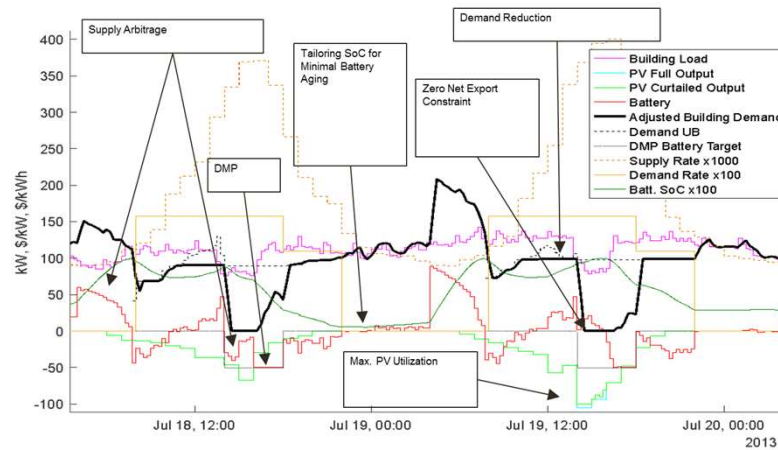


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Distributed Energy Resources - Microgrid

The Next Phase in Energy Flexibility and Efficiency



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What Regulatory Environment do we need?

Harmonisation of ideas, technologies & jurisdictions is key



- Renewable incentives
- Efficiency incentives
- Favourable energy market rules around flexibility services
 - Ancillary
 - Capacity

Country	Capacity	Ancillary Service		Wholesale	Distribution
		Frequency	Reserve		
Austria					
Belgium					
Finland					
France					
Germany					
Great Britain					
Ireland					
The Netherlands					
Norway					
Switzerland					
Open					
Limited market access					
Pilot					
No market access					

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Thank you!

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