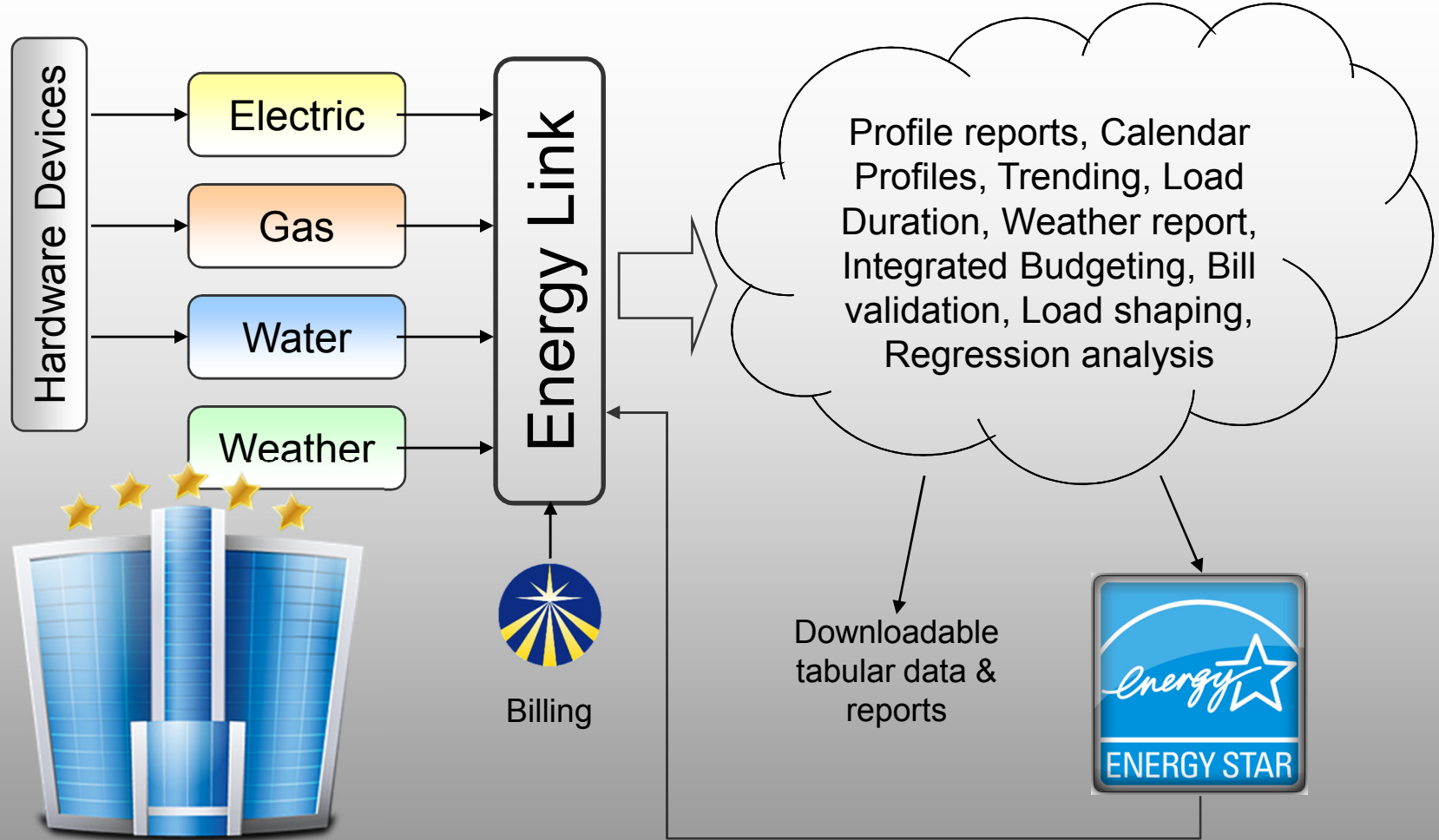


Set It & Forget It?

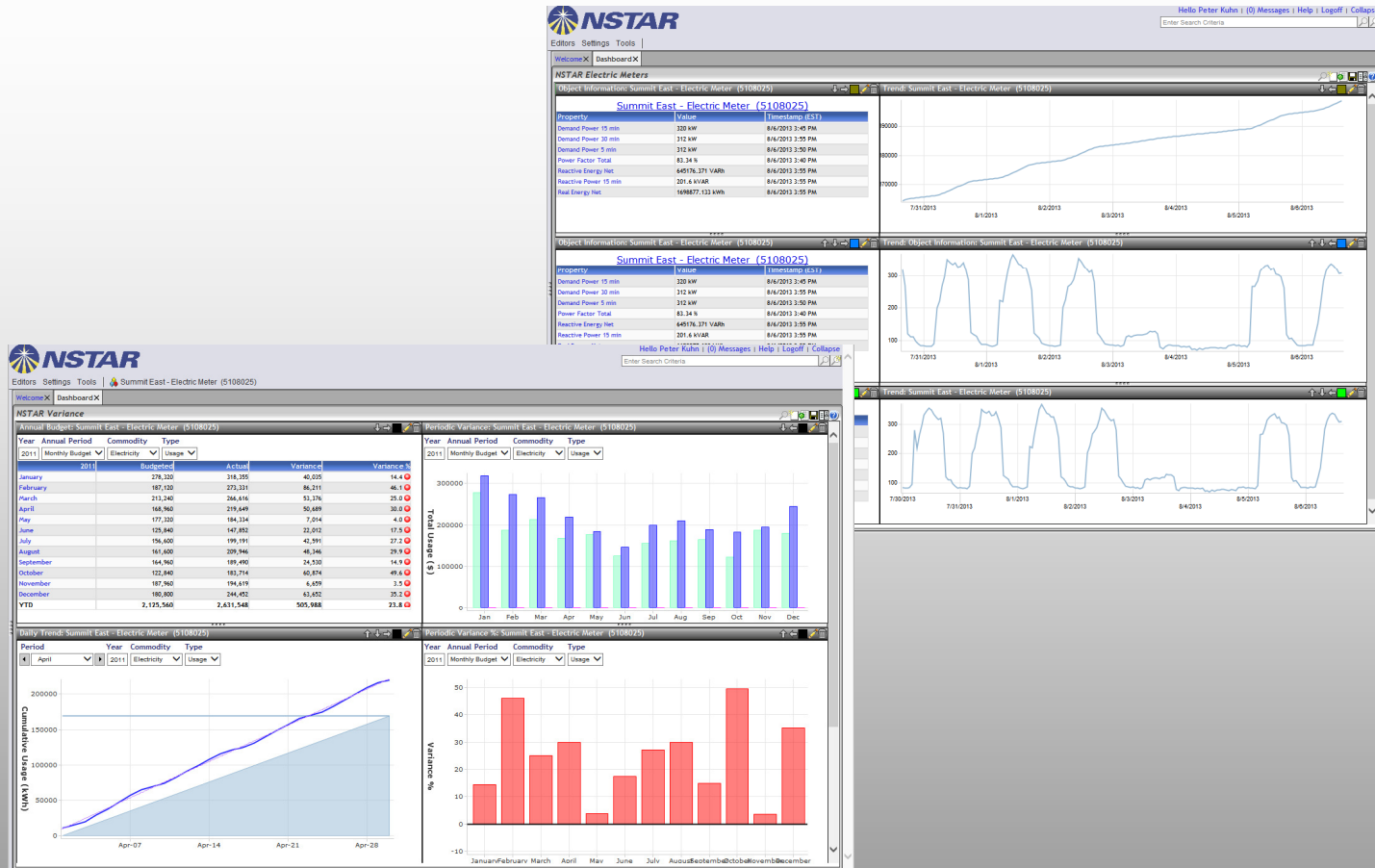
Dec 4 2014



NStar's EnergyLink



**Northeast
Utilities**



NStar's EnergyLink



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Is energy monitoring a set-it-and-forget it proposition?



Set It & Forget It?



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Is energy monitoring a set-it-and-forget it proposition?



NRDC Case Study: 3 multi-tenant office buildings, 100-300k sqft, 300-900 occupants each.

NRDC Study



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Two pronged approach:

Energy monitoring & alarms

3rd party expertise

NRDC Study



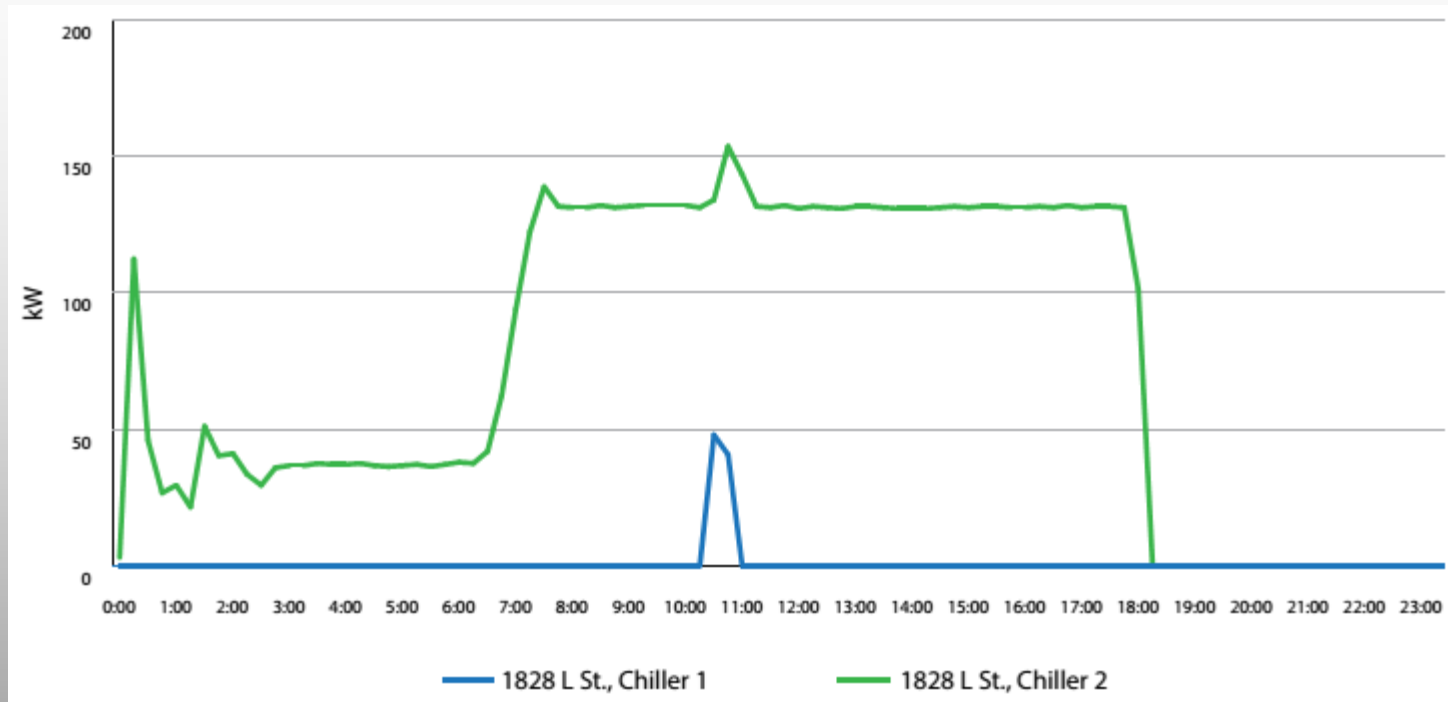
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- HVAC deadband of at least four degrees.
- Conduct a night audit annually to identify lights and equipment that are on out of schedule.
- Align HVAC schedules with lease requirements.
- Setbacks for HVAC equipment at night, adjusted to the season.
- All VFDs set to auto and confirm speed settings.
- Confirm chiller lockout schedule and settings.
- Adjust the free cooling temperature to season.
- Timers on garage fans and set them on auto mode.

Sample recs



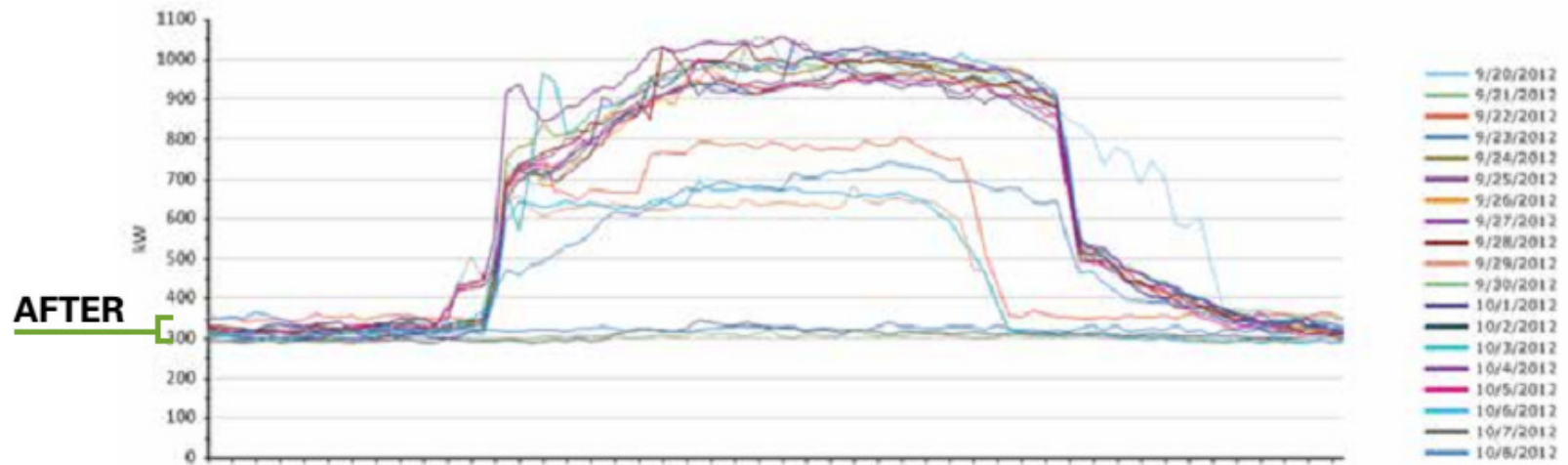
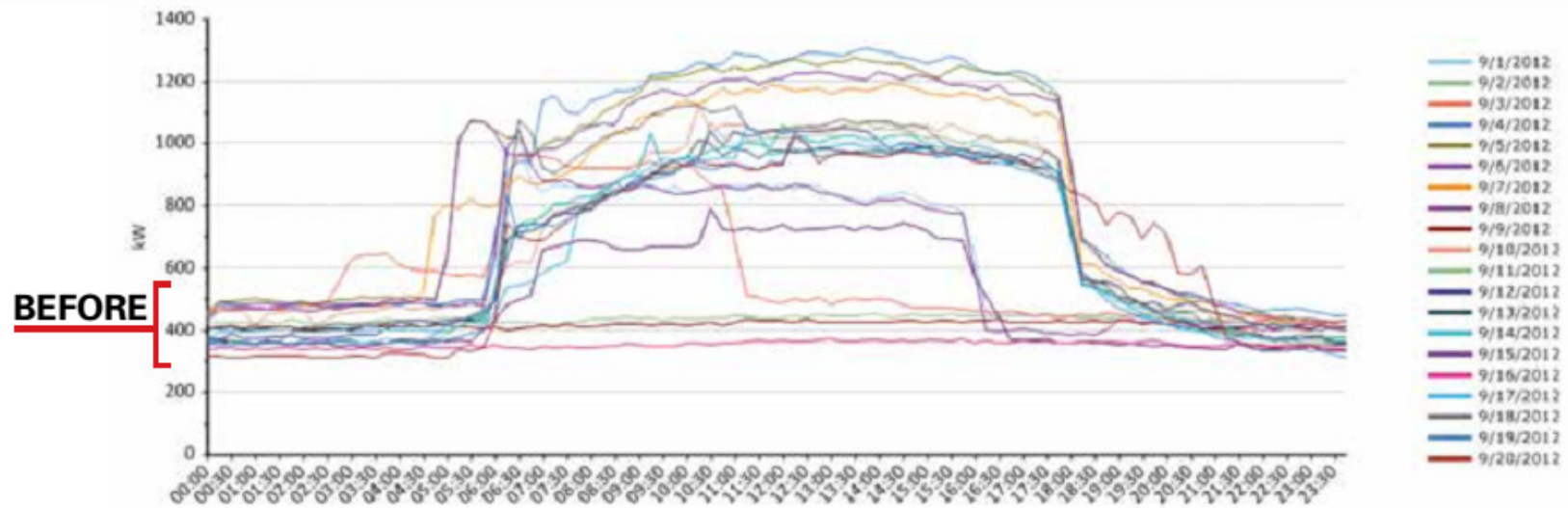
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Chiller anomalies



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Software bug



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	Average per building	Total for 3
One-Time Expenses		
Submetering & Network	\$11,233	\$33,700
3 rd -party Setup	\$10,000	\$30,000
Ongoing Monitoring Expenses		
3 rd -party annual costs	\$20,640	\$61,920
Personnel Time	\$3,600	\$10,800
Total Project Costs (Year 1)	\$48,107	\$144,320
Annual Recurring Cost (Year 2)	\$21,840	\$65,520

Costs



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Year 1 only

	Sq ft	Occ.	2011 MWh	2012 MWh	Savings (MWh)	Savings (%)	Savings (\$)
1	110k	302	1,965	1,516	449	23 %	\$58,352
2	330k	928	5,591	5,227	364	7 %	\$47,288
3	240k	462	5,197	4,328	870	17 %	\$113,063
Total Combined			12,753	11,071	1,682	13.2% Avg	\$218,703

Study Results



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Utilities**

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Total Costs							\$144,320
Net, Year 1							\$74,383

The Bottom Line



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Utilities**

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Total Combined			12,753	11,071	1,682	13.2% Avg	\$218,703
Total Costs							\$144,320
Net, Year 1							\$74,383

Energy Star Scores at start: 71, 78, 86

At end: 91, 87, 88

The Bottom Line



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What made the difference?

Buy-in from management

Biggest Drivers



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What made the difference?

Buy-in from management

Partnership between 3rd party & staff

Biggest Drivers



**Northeast
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What made the difference?

Buy-in from management

Partnership between 3rd party & staff

3rd party expertise

Biggest Drivers



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Where is the market headed?

Data streams will become a commodity

The Future



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Where is the market headed?

Data streams will become a commodity

Apps and services, the next layer

The Future



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Continuing Value



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For more information on EnergyLink:

http://www.nstar.com/business/energy_efficiency/energy_link.asp

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Questions?



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