



Earth Rangers Centre

For Sustainable Technology





Earth Rangers Centre
For Sustainable Technology

Overview

- About Earth Rangers
- Earth Rangers Centre
 - Recognition
 - Design & Systems
 - (Energy) Operations
- Questions

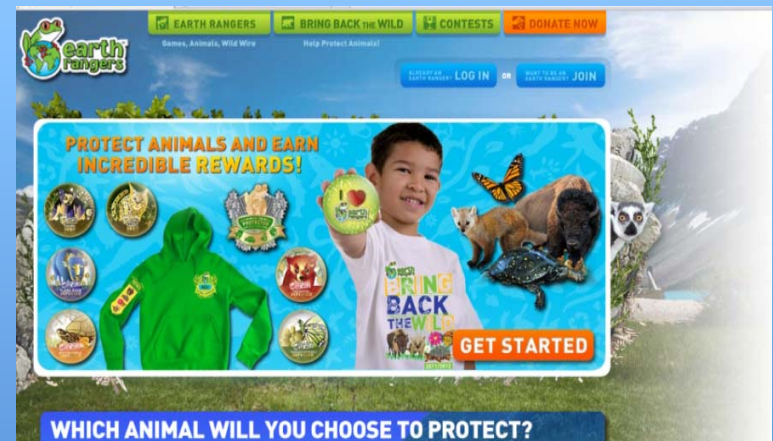


About Earth Rangers

Earth Rangers' award winning live shows and interactive programs motivate hundreds of thousands of children each year to take action to help protect the planet.

Our mission: *Bring Back the Wild*

- Educate children about the importance of biodiversity and the threats facing animals and their habitats
- Inspire children to adopt more sustainable behaviors
- Engage children and their families to take action to protect animals





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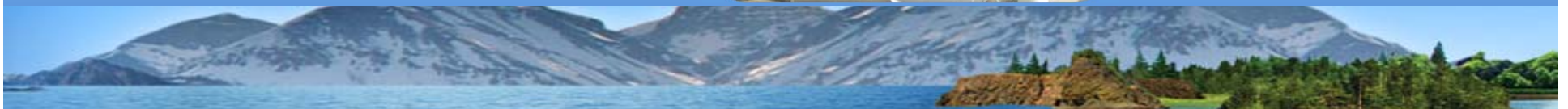
- 60,000 ft² green building
 - Energy metering
 - Smart automation & controls
 - Solar generation
 - Green roofs
 - Earth tube fresh air tempering





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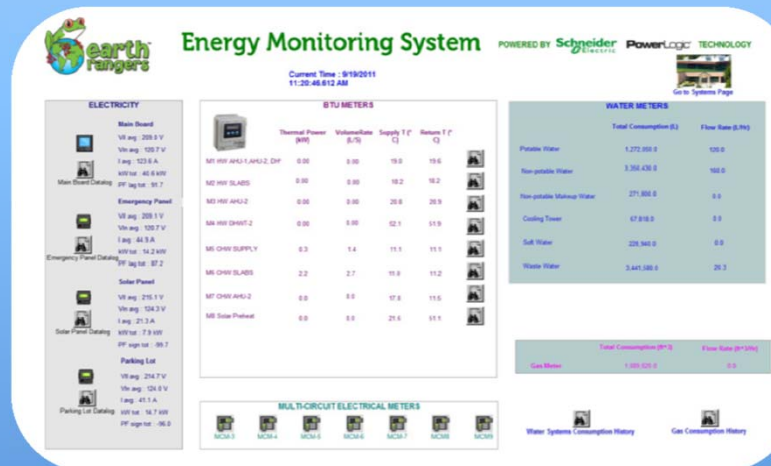
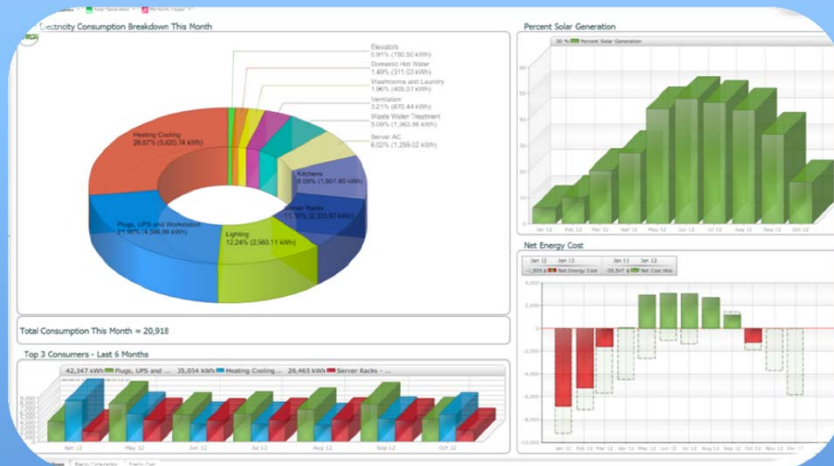
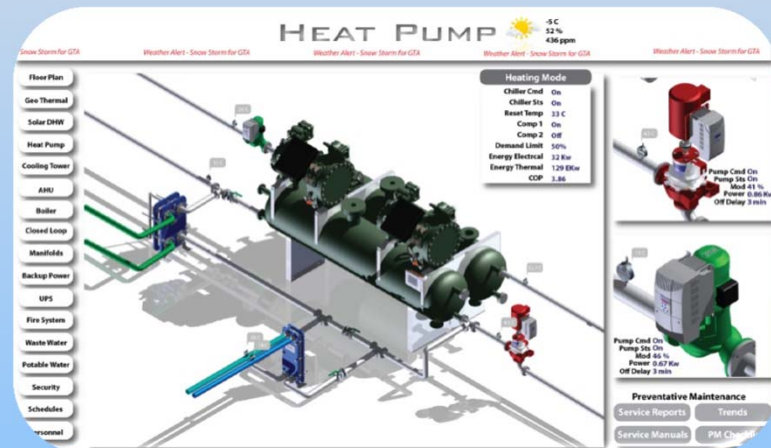
- 60,000 ft² green building
 - Innovative water and wastewater management
 - Efficient data center
 - Geothermal heating & cooling
 - Integrated security
 - Solar thermal hot water
 - & more





Solutions

- Andover Continuum
- ION Enterprise
- Energy Operations
- JouleX Energy Manager



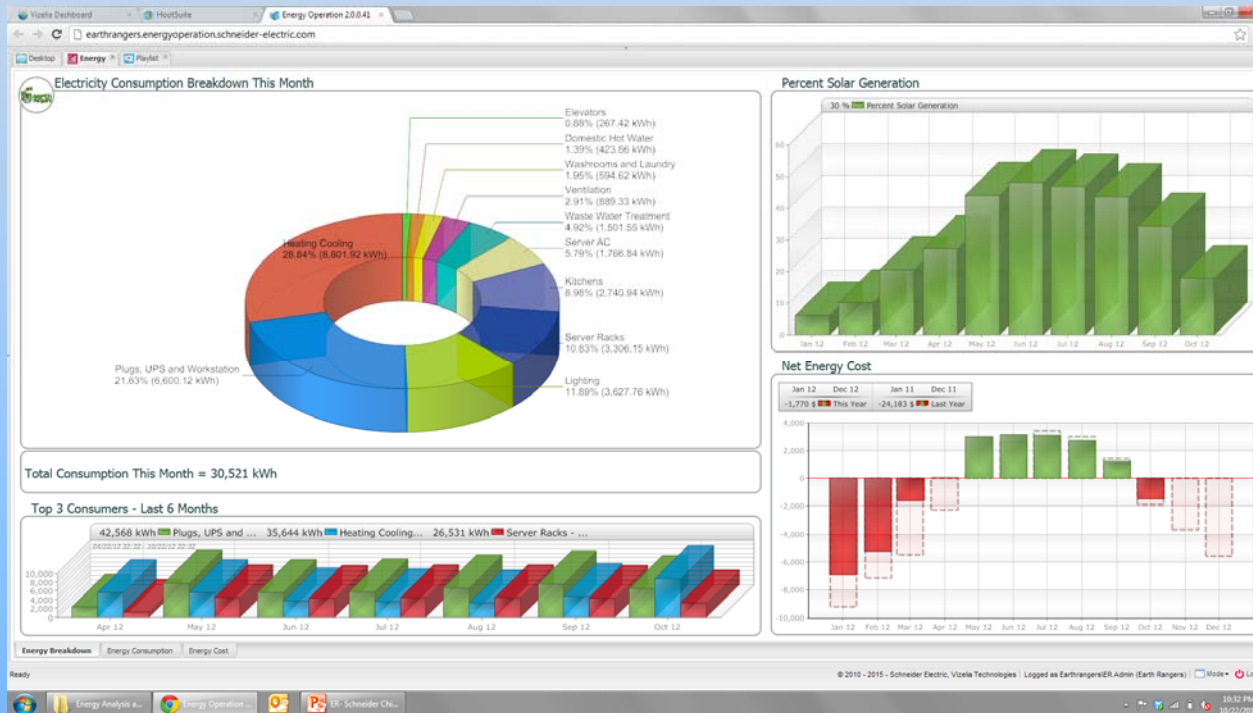
Earth Rangers Centre

- Certified Gold under LEED for New Construction (2006)
- Platinum under LEED for Existing Buildings: Operations & Maintenance (2012)
- Schneider Global One Award (2011)
- Consulting Engineers Ontario Award of Excellence (2012)
- GE Ecomagination Leadership Award (2006)





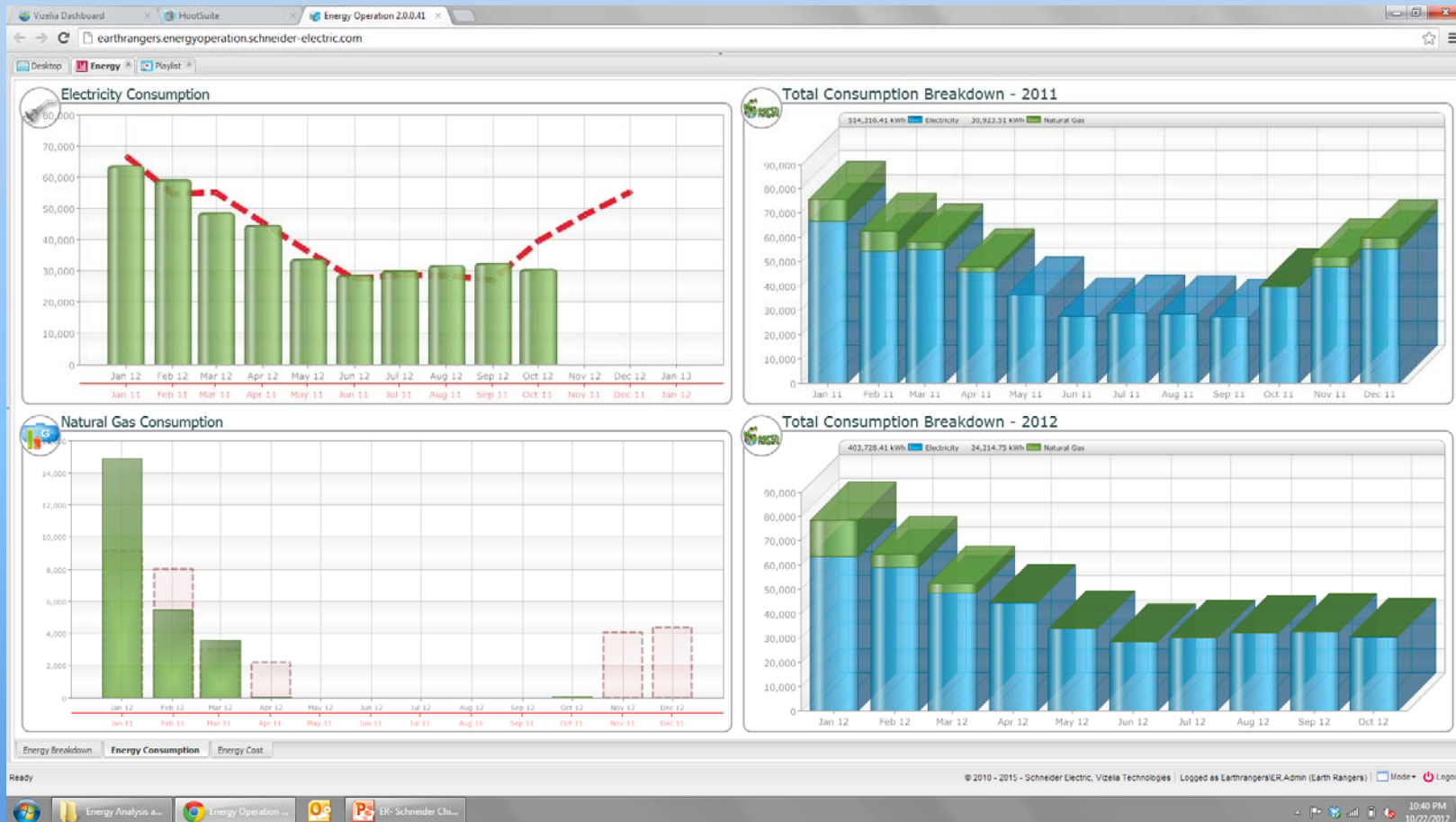
Performance



- 2011: Consumption = <9 ekWh/ft²
 - average Canadian office building = 35 ekWh/ft²
- Energy Star 95 rating
- 10% average decrease in consumption YOY
- 2011: 83 % better than code
- 13/15 LEED for Existing Buildings Energy points
- Time of use savings

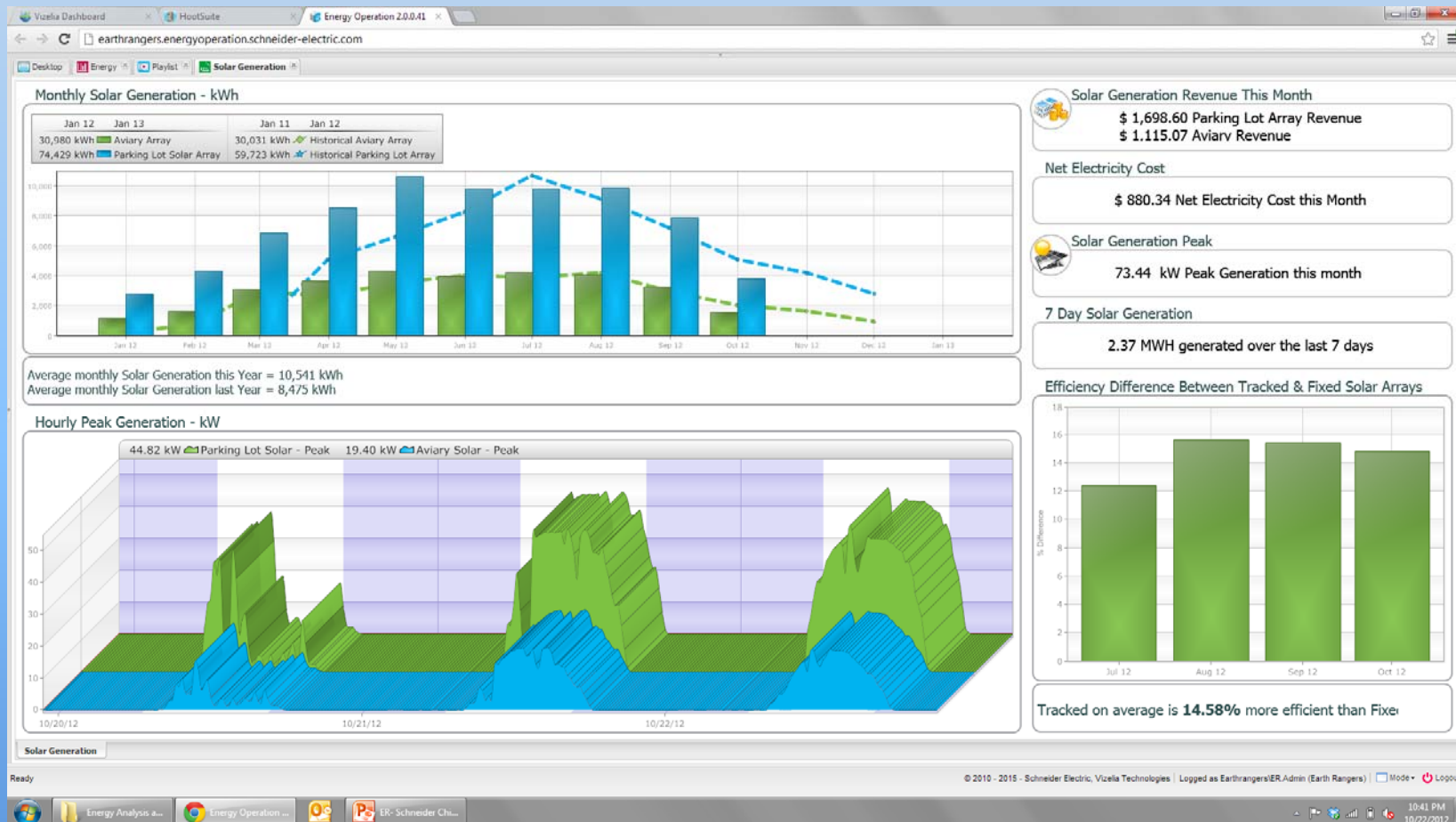


Performance





Performance





Performance

Vizelia Dashboard | HootSuite | Energy Operation 2.0.0.41 | earthrangers.energyoperation.schneider-electric.com

Facilities Scorecard - MTD

		Actual	Budgeted
Consumed (kWh)			
Total Energy		32,489.73 kWh	25,500.00 kWh
Total Energy per Square Foot		0.02 kWh/ft2	0.39 kWh/ft2
Produced (kWh)			
Aviary PV		3,254.65 kWh	3,000.00 kWh
Parking Lot PV		7,917.55 kWh	7,500.00 kWh
Net (kWh)			
Net from Grid		24,554.35	25,500.00 kWh
Cost (\$)			
Consumption Cost		\$4,548.56	\$3,150.00
Generation Revenue		\$5,928.04	\$5,461.50
Net Cost		\$-1,279.48	\$-2,311.50

MTD Budget Remaining: 7,864 kWh

Consumption Vs Budget - YTD

Facilities Scorecard - YTD

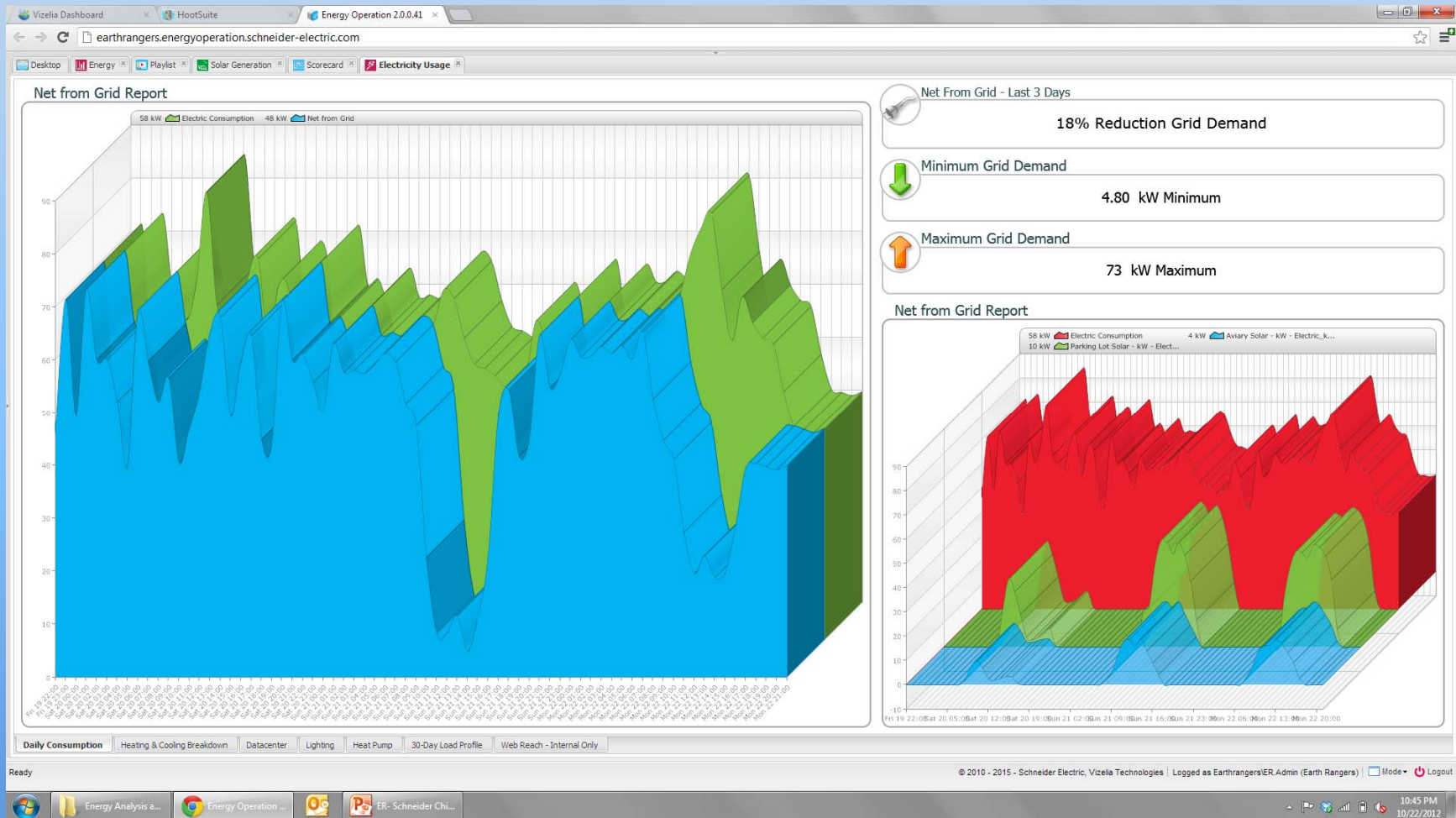
		Actual	Budgeted
Consumed (kWh)			
Total Energy (kWh)		427,943.17 kWh	522,050.00 kWh
Total Energy per Square Foot (kWh/ft2)		6.48 kWh/ft2	7.91 kWh/ft2
Produced (kWh)			
Aviary PV (kWh)		30,980.69 kWh	32,050.00 kWh
Parking Lot PV (kWh)		74,570.46 kWh	74,000.00 kWh
Net (kWh)			
Net from Grid		329,157.95 kWh	522,050.00 kWh
Cost (\$)			
Consumption Cost		\$59,912.04	\$64,944.00
Generation Revenue		\$55,123.88	\$55,633.65
Net Cost		\$4,788.16	\$9,310.35

YTD Budget Remaining: 94,107 kWh

Annual Energy Consumption Comparison

© 2010 - 2015 - Schneider Electric, Vizelia Technologies | Logged as Earthrangers/ER Admin (Earth Rangers) | Mode | Logout

Performance





What Next?

- Heating & cooling off-peak
- Taking advantage of “free-cooling”
- Reduce plug loads while occupancy increases
- Document savings
- Integrate JouleX into plug load “pie slice”





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Questions?

Thank you!

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