

CITY OF FORT LAUDERDALE
 SUSTAINABILITY ADVISORY BOARD
 CITY HALL CONFERENCE ROOM
 100 NORTH ANDREWS AVENUE – 8th FLOOR
 FORT LAUDERDALE, FLORIDA 33301
 November 25, 2013 – 6:30 PM

				Cumulative Attendance 1/2013 through 12/2013	
MEMBERS	APPT By	ATTENDANCE	PRESENT	ABSENT	
1. Valerie Amor, Chair	M	P	10	1	
2. Alena Alberani, Vice Chair	II	P	11	0	
3. Daniel Ayers	M	P	5	3	
4. Steven Cook	I	P	8	3	
5. Vicki Eckels	IV	P	10	1	
6. Darin Lentner	IV	P	9	2	
7. Jim Moyer	III	P	11	0	
8. Mate Thitisawat	C	P	10	1	
9. Jim Hetzel	I	P	7	1	
10. Vacant	II	-	-	-	
11. Cheryl Whitfield	III	P	7	0	

Also Present

City Staff – Sustainability Division of Public Works

Julie Leonard, Assistant Director of Public Works Sustainability

Gene Dempsey, Urban Forester

Adrienne Ehle, Environmental Analyst

Heather Steyn, Sustainability Specialist

Call of Order/Roll Call

Chair Amor called the meeting to order at 6:36 pm, roll was called, and it was determined a quorum was present. Mr. Moyer arrived 6:47 pm. Ms. Alberani left at 8:40pm

Approval of Meeting Minutes

Ms. Eckels noted minor edits to the minutes of the October 28, 2013 meeting.

Motion made by Ms. Eckels and seconded by Mr. Hetzel to approve these minutes with the corrections. In a voice vote, the Board motion passed unanimously.

New Business

Landscape Ordinance Presentation

City staff Gene Dempsey and Adrienne Ehle reported the proposed amendments to City Ordinance 47-21 Landscape and Tree Preservation. The revised Ordinance will include modifications to strengthen water conservation efforts and provide specific language on native species similar to the landscaping policy of Broward County. The modifications will also target sustainable goals in the City's Strategic Plan and Sustainability Action Plan. Additional agricultural topics were discussed such as fruit-bearing trees, irrigation requirements, and rain catching systems, fertilizer and turf alternatives.

The presentation concluded with an overview of the Ordinance process, including the opportunity for public comment when presented to the City's Planning and Zoning Board and City Commission. It was noted public comments are recognized as individual residents, not as a Board. Communications from the Board must be submitted through the Staff Liaison.

Rain Tree

Upon the Board's request, Ms. Steyn reported there was not any significant progress to the Marina's Loft Development based upon permit activity.

Other Items

Mr. Ayers inquired about City conservation efforts for mangroves preservation. Mr. Dempsey noted the following City programs to bring awareness of mangrove habitats:

- Signage
- Education
- YEA! (Youth Environmental Alliance)
- Mangrove Awareness Day

POM Energy Presentation

On the behalf of POM Energy, Mr. Pete Chiaravelle presented to the Board PowerGUARD™ an efficiency technology. The presentation included the following highlights:

- POM manufactures and distributes the PowerGUARD™ Power Conditioning System.
- Electricity delivered to the customer's door is at a 33% loss.
- Municipal water and wastewater facilities are place a high demand on energy consumption.
- City facility, GTL Wastewater Treatment Plant is currently testing the PowerGUARD™ technology.

Other New Business

December 23rd meeting will be canceled due to the holidays.

Staff Liaison Report

Ms. Steyn provided highlights of the following announcement/events:

- Board rep-appointments
- SE Regional Climate Summit
- Water Resources Act
- Emerald Award
- Las Olas Mobility Study Results (City)

NOAA Climate Training

Ms. Leonard shared the National Oceanic and Atmospheric Administration and the City will host a three day workshop for staff in January 2014.

Old Business

Agricultural Ordinance/Urban Farming

The Board reviewed City Commissions direction of the Communication presented during November 5th meeting. The Board made the following comments/suggestions:

Ms. Eckels

Commission did not assign Staff to address the edits requested in the Communication. Proposed modifications should be formatted in a list, reviewed by the Board, and then presented to the Commission.

Mr. Hetzel

Suggested specific barriers should be identified since only two urban farming applications have been submitted.

Chair Amor

Prefers for the Board to resubmit the Communication.

Ms. Whitfield

Recommended to edit the Ordinance in Microsoft Word.

Mr. Ayers

Suggested to include domestic fowl in the future Communication and was agreed by Mr. Lentner - the Commission may not be receptive to, we can still get some portions of the changes we'd like to be considered.

Mr. Lentner

Suggested the correspondence to be a format desired by Commission with the supporting documentation. Mr. Hetzel agrees that even though this amended document does occur, it will take months for staff to revise if and when approved.

Ms. Whitfield

Stated a similar model is being used in Berkeley, California.

Mr. Moyer

Suggested to collaborate with the HOAs to work on the rewriting of the ordinance.

Mark Your Calendar (Events)

There is a brief discussion of upcoming events: Light Up the Beach, Light Up Sistrunk, Comprehensive Economic Development Plan meetings, GoSolar Fest.

Communication to Commission

Ms. Eckels has drafted a communication to Commission regarding today's presentation. She reads the draft which states, "On November 25, 2013, the Sustainability Advisory Board was given a presentation on inductive reactor technology. This technology is applicable to all City facilities and will contribute to a reduction in a facility's energy use and correspondingly to a reduction in the City's greenhouse gas emissions. This technology is already in use at the City's George T. Lohmeyer (GTL) wastewater treatment plant. We recommend that the City Commission direct staff to begin expanding the use of this technology to help meet the energy and air quality goals outlined in the Sustainability Action Plan. A broader use of inductive reactor technology has far-reaching consequences for our community as we learned from the New York State Energy Research and Development Authority (NYSERDA) report referenced in the presentation, a reduction in distribution losses and lower demand at end-user facilities saves approximately three times the amount of energy that must be generated at the source power plant. Using existing energy sources more effectively benefits everyone."

Motion is made by Ms. Eckels to present the communication and seconded by Ms. Whitfield. In a voice vote, the Board motion passed unanimously.

Items for Next Meeting:

None.

Public Comment:

None.

Committee Comments:

Chair Amor

Shared details about the 2013 USGBC GreenBuild event she attended in November. In addition, she shared her comments about San Francisco's Eco District community.

Mr. Moyer

Noted the City of Miramar and the City of Deerfield Beach passed a ban of for-profit collection donation boxes. He has been contact with the City Commissioner and Manager offices to implement this policy.

Mr. Thitisawat

Announced Florida Atlantic University has received art and technology program funding and will collaborate with the City to create off-campus location for these initiatives.

Ms. Whitfield

Remarked the technology advances of the national economic group Brazil, Russia, India, China and South Africa (BRIC) and that South Florida would be an ideal location for the alliance.

Ms. Eckels

Invited the Board to attend the Trash-to-Art exhibit is from December 2-27 and also noted the reception will be held on December 6th. Chair Amor will have two models from her summer camp on display.

Adjournment

With no further business to come before the Board at this time, the meeting was adjourned at 9:22 pm. **Motion to adjourn** made by Mr. Hetzel. Seconded by Mr. Lentner.

Next meeting date: January 27, 2014

[Minutes prepared by Mary Ann Johnston]



Presents



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For



November 25, 2013

- ◆ Fundamentals of Electric Power Production
- ◆ What is *PowerGUARD*[™] Technology
- ◆ *PowerGUARD*[™] and Sustainability

Power Losses

Available

100 %



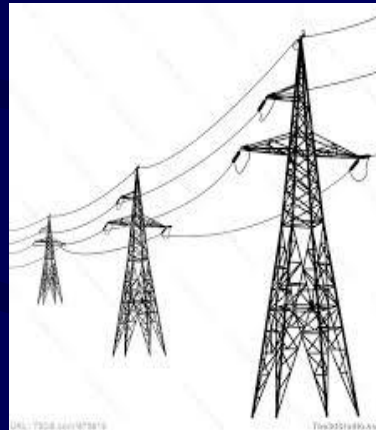
Heat and
Internal Use

60%



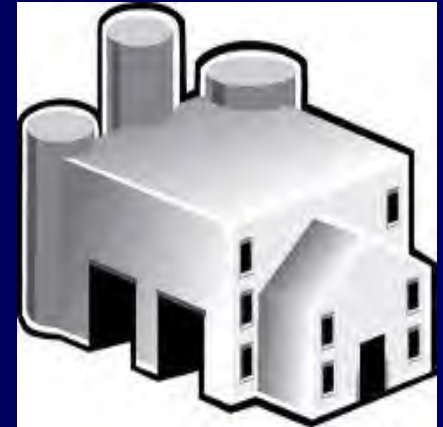
Transmission Line

7 %



Delivered to
End User

33 %





NYSERDA Project Name: Local Distribution Power
Factor Correction (At the load)

NYSERDA Project # 11059

The average efficiency of delivered energy to the customer, after factoring in generating losses and transmission and distribution losses, is approximately 33%. Of every three watts of energy consumed at the generating plant, only one watt reaches the customer's meter. More energy is lost through inefficiencies after the meter, within the customer premises. **Any system that can reduce load, including load caused by distribution losses, will save approximately three times that amount of energy at the generating plant. Associated greenhouse gas production and emission of other pollutants will also be reduced proportionally.**

Efficiency Most Cost Effective Solution

Fort Lauderdale Energy Consumption

- ◆ Water and Wastewater accounts for 55% of Fort Lauderdale usage
- ◆ Motors use 80%
Cause poor power factor, other energy losses

Power Factor

Mug Capacity:
Total Power - kVA



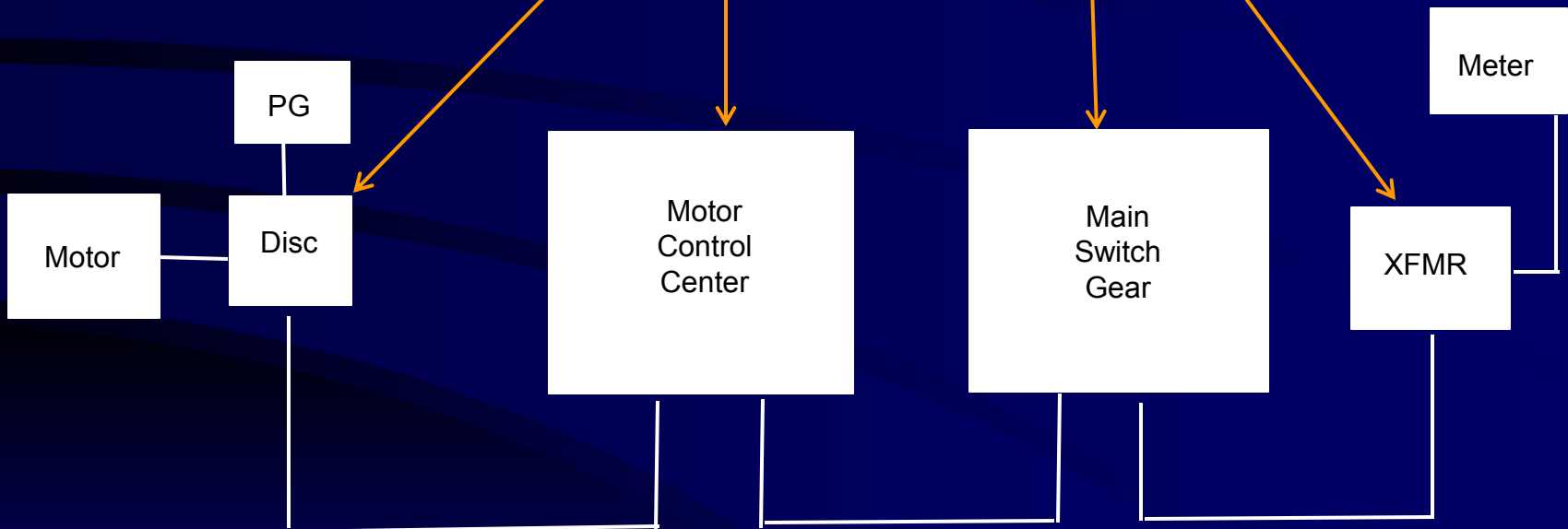
Foam:
Reactive Power - kVAR

Beer:
Real Power - kW

Options for Managing Power- kWh

Line Losses

Points of Higher Resistance and Losses



Power = $I^2 R$ Lower Amps = Lower kWh

Options for Managing Power- kWh

◆ *PowerGUARD*™ Technology

- improves power factor
- reduces amperage from point of connection to source
- helps raise and balance voltage
- reduces transients and provides spike and surge protection
- lowers total harmonics
- stabilizes voltage

✓ Which lowers kW Demand/ kWh

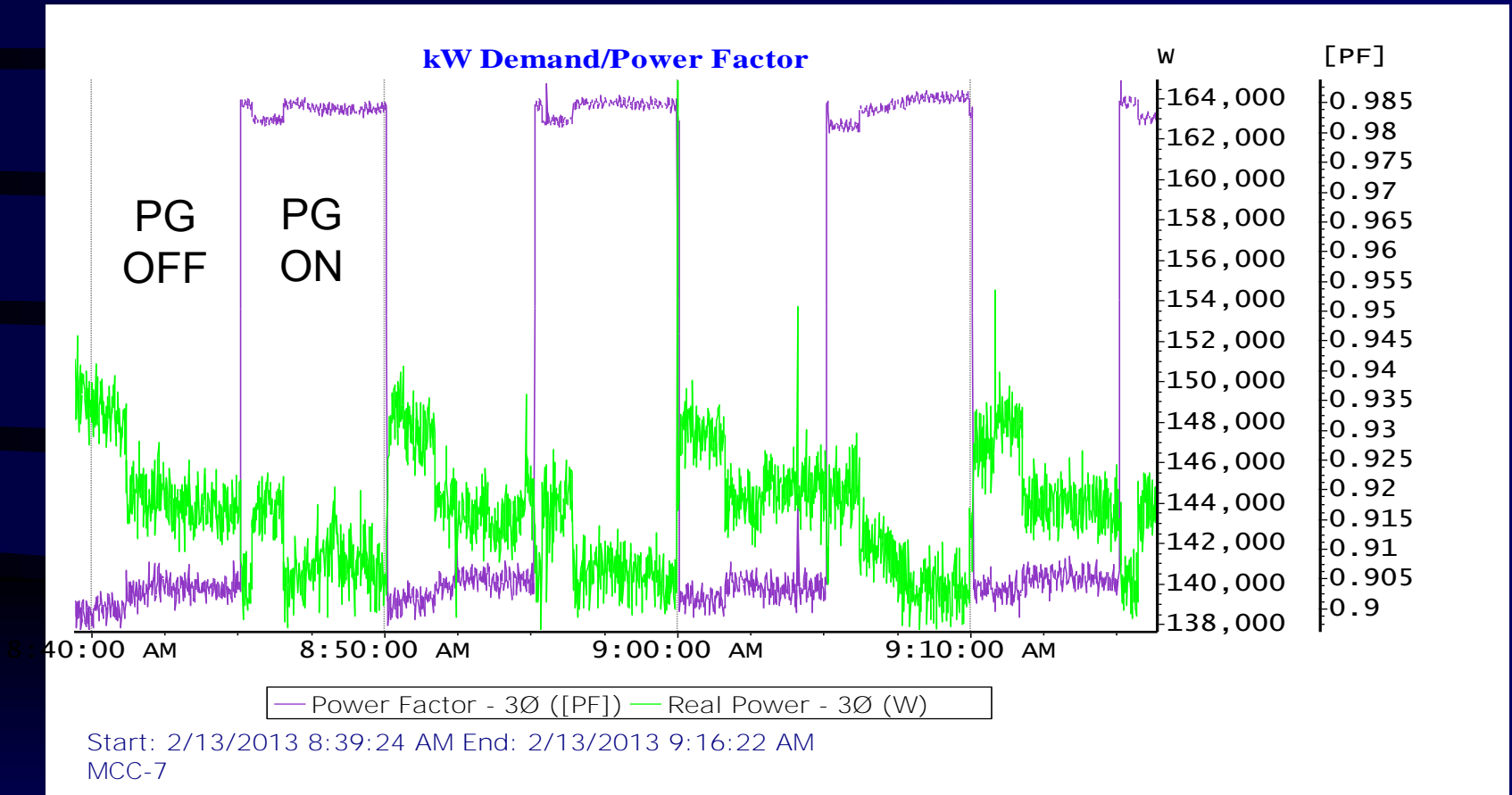
PowerGUARD[™] **Benefits**

- ◆ Energy Savings
- ◆ Lightning, Spike and Surge Suppression
- ◆ Improved Power Factor
- ◆ Better Balanced Voltage
- ◆ Reduced Harmonics
- ◆ Reduced Electrical Repair Costs

Fort Lauderdale WWTP

- ◆ GT Lohmeyer WWTP uses approximately 26% of total Fort Lauderdale Electrical Usage
- ◆ WWTP made initial purchase of 6 *PowerGUARD*™ Units in December 2012
- ◆ Units installed and tested in February 2013
- ◆ Total Savings of 6.54 kW/kWh- ROI of 49 months (without cost of power increases)
- ◆ Notable Power Quality Improvements

Fort Lauderdale WWTP



Average savings = 3.2 kWh

Fort Lauderdale WWTP

◆ Annual Impact to Sustainability:

28 Barrels Oil or 6.5 tons Coal

18.4 tons CO₂ reduction

6 tons NO reduction

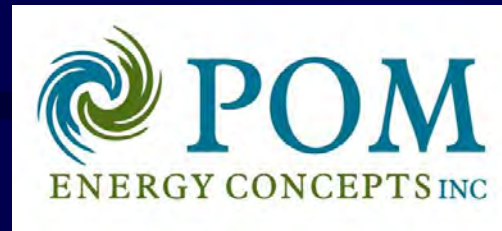
3 tons SO reduction

Benefits multiplied x 3 when generation and distribution losses factored in

Summary

- ◆ Vast amounts of energy losses on transmission lines
- ◆ *PowerGUARD*[™] reduces line losses all the way back to utility generating plant
- ◆ Cost effective strategy to reduce energy usage and add to sustainability toolbox

Questions?



www.pomenergyconcepts.com