

Comprehensive Energy Projects

May 4, 2016

Andy Kelly

Manager of Plant Engineering

Central Production Facility Co-op & Northeast Hot Fill Co-op



OUR DISCUSSION FOR TODAY

- ❑ **Background**
 - ❑ **CPF Facility**
 - ❑ **The role of the utility in supporting EE projects at CPF and support of the Industrial Initiative**
 - ❑ **Energy Efficiency projects at CPF**
 - ❑ **Role of Energy Efficiency from a financial and productivity standpoint at CPF**
 - ❑ **Q&A**
- 

LED LIGHTING PROJECT PAVED THE WAY....

- ❑ Plant had T8 Technology
- ❑ Existing Lighting provided a dim atmosphere
- ❑ Worker productivity and general
- ❑ Mercury in Fluorescent Lamps posed an environmental challenge and were costly to replace
- ❑ CPF participated in the energy efficiency programs previously but sporadically



LED LIGHTING BEFORE/AFTER



LED LIGHTING BEFORE/AFTER



INCREASED LIGHT LEVELS WITH EXCEPTIONAL SAVINGS AND CONTROL!



LIGHTRULES

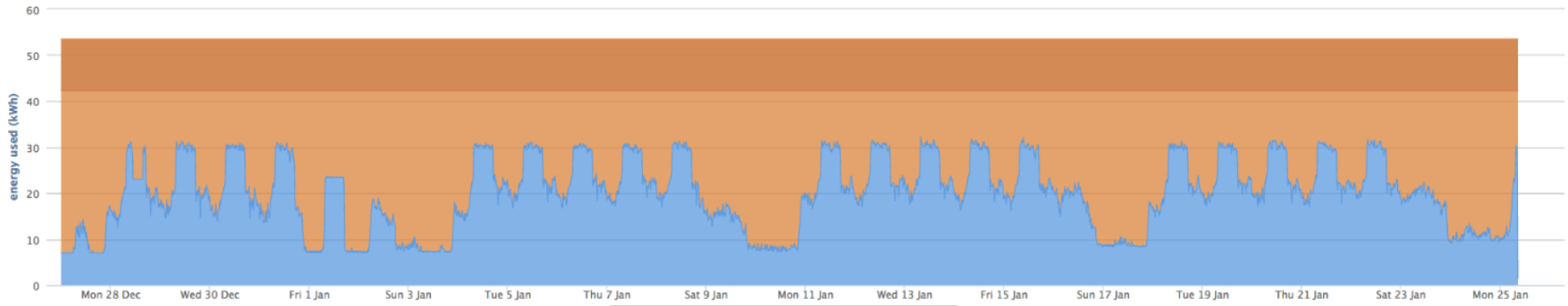
English (US) ▾

Welcome, Kate Hitchner

Logout

Dashboard | Map | Configuration ▾ | Calendar | Manual Control | Analysis | Reporting ▾ | Administration ▾

One Month Energy Usage
Energy Usage - Full Facility - Sun Dec 27, 2015



pre-install baseline ALL ON baseline Energy Usage

Savings vs previous:	63377 kWh
Savings vs ALL ON:	95038 kWh
Total Energy Used	55725 kWh
Peak 15min	32.23 kWh

« Nov 27

Dec 27, 2015

Jan 27 »

Edit Report

Room All Rooms ▾

Zone All Zones ▾

COMPRESSOR FAILURE

- ❑ Compressor failure – Fix existing or buy new?
- ❑ Incentives enabled CPF to buy a new machine
- ❑ National Grid looked at the system comprehensively addressing air leaks, installing regulators and air nozzles allowing for a larger incentive and more efficient system
- ❑ In addition the water cooled compressor will be used for heating preform storage room
- ❑ In parallel to the compressor replacement adding a blow molding machine – would have necessitated buying an additional compressor
- ❑ The overall project with air reduction and efficiencies allowed for replacement compressor without the need for an additional compressor



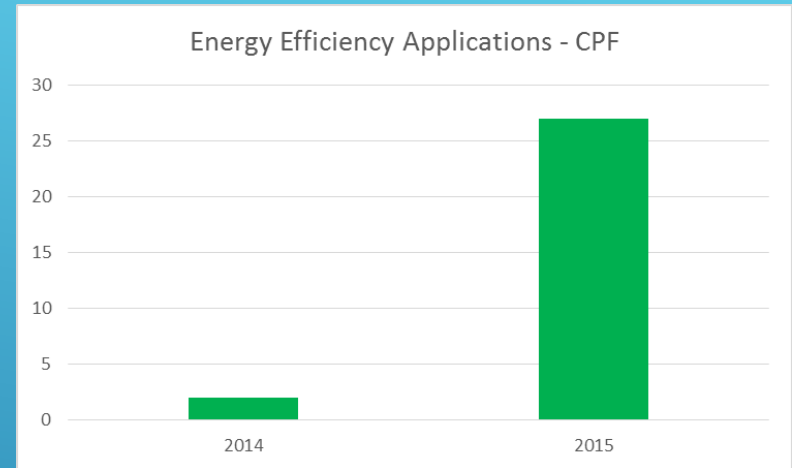
CHANGING THE MINDSET TOWARD ENERGY EFFICIENCY

- ❑ National Grid is contacted before purchasing any equipment!
- ❑ Incentives have encouraged investment in plant and equipment
- ❑ The support from National Grid's industrial team managed by Peter Russo has been instrumental in this shift
- ❑ Our plant is now more vibrant with lighting and the installation of new equipment and has resulted in a more positive atmosphere



NATIONAL GRID INCENTIVES HAVE HELPED FACILITATE THE RAPID GROWTH IN PROJECTS!

- ❑ **Clean In Place Project – Gas Savings**
- ❑ **VFD's**
- ❑ **Line 1 & 3 Blender upgrade impacted weekend run times**
- ❑ **Line 2 & 4 Packer upgrades electric to natural gas**
- ❑ **Krones 1 & 2 Packer upgrades electric to natural gas**
- ❑ **Boiler controls and economizer**
- ❑ **Working to improve proposed lines**



COMPREHENSIVE LIST FOR 2015

2015 Ammonia Room VFDs	5366311	2015 Cap Room Heat Recovery	4548337
2015 CIP System Upgrade	5436048	2015 Line 1 Blow Molder	4355341
2015 New Line 2 Packer - Electric to Gas Conversion	5444805	2015 Blow Molder Air Compressor	5962757
2015 2x100, 1x200 VFD Ammonia Compressors	5366310	2015 Water Room - VFD	4878012
2015 Line 3 Blender	5356528	2015 Line 2 Filler - VFD	4872885
2015 Ammonia Room Compressors Motors	5564890	2015 Line 6 - VFD	4876179
2015 Line 4 Packer	5444651	2015 Cooling Tower Fan, Skid, Water Supply - VFD	4876182
2015 Line 1 Blender Upgrade	5570030	2015 Cooling Tower & Tank System - VFD	4876813
2015 Ilios Heat Pump - ELECTRIC & GAS Savings	5647204 & 5678344	2015 BC Conveyor Panel - VFD	4877641
2015 Lime Slurry	5781075	2015 Ammonia Room - VFD	4878000
2015 Krones 1 Heat Tunnel Switch	5850441	2015 Airvar RF OK - VFD	4878003
2015 Krones 2 Heat Tunnel Switch	5850443	2015 Plant Supply Air and Exhaust - VFD	4878005
2015 Chilled Water Pipe Insulation	5850445	2015 Line 1 - VFD	4874041
2015 15 HP Deaerator - VFD	5859056		

BUSINESS/ECONOMIC BENEFIT

- ❑ Our cost per case is lower as a result of the Industrial Initiative
- ❑ Enhanced marketplace stature in the region
- ❑ Energy Efficiency is now engrained in our culture



Questions?

Andy Kelly

Manager of Plant Engineering

CPF/NEHF

(617) 543-7958

akelly@cpf-nehf.com

