



2017 EE NOW

Lessons Learned From Case Studies: Avoiding Pitfalls & Spotlighting Success Part II

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Anchorage School District
Educating All Students for Success in Life

Agenda

- ASD Goal: 20% Reduction by 2020
- Pitfalls
- Spotlighting Success
- Future/On-Going Initiatives
- Q & A



The Anticipated Journey



The Actual Journey



Disclaimer: ASD is somewhere in the middle of their journey



ASD Goal: 20% Reduction by 2020

- District spends ~\$15M/yr on Natural Gas (\$5M) & Electricity (\$10M)
 - 20% Reduction = \$3M/yr savings
 - \$3M a year x 15 year (term of loan) = \$45M
 - \$45M invested over 3 years
 - Potential savings based on:
 - High efficiency condensing boilers (20%)
 - LED lighting (25%)
 - Retro-Commissioning (10%)
 - Combined Heat & Power
 - Solar



Pitfalls

- Pursuit of Alternative Energy Financing
 - Lengthy process vs initial project ROI development
 - ~60-90 days develop/present Business Case
 - ~60 days for School Board & Assembly approval
 - Explored financing through RFP/ESCO/AHFC only to find out Municipal Charter requires voter approval
 - MOA Master Lease only requires Assembly approval
 - Interest rate & terms impact ROI
 - Nationally recognized ESCO required
 - Understanding the loan



Pitfalls

- Learning Curve on Co-Op AKDOT&PF ESCO
 - Lengthy process to understand/justify ESCO and seek administration/board approval
 - First hybrid RFP unsuccessful; needed to revise RFP and re-solicit, but contract expired



Pitfalls

- Pursuit of Alternative Energy Opportunities
 - Lengthy process to understand playing field
 - Combined Heat & Power
 - Must seek interconnection agreement first!
 - Solar
 - Public owner challenge to share in 30% tax credit
 - Understanding ownership vs Power Purchase Agreement



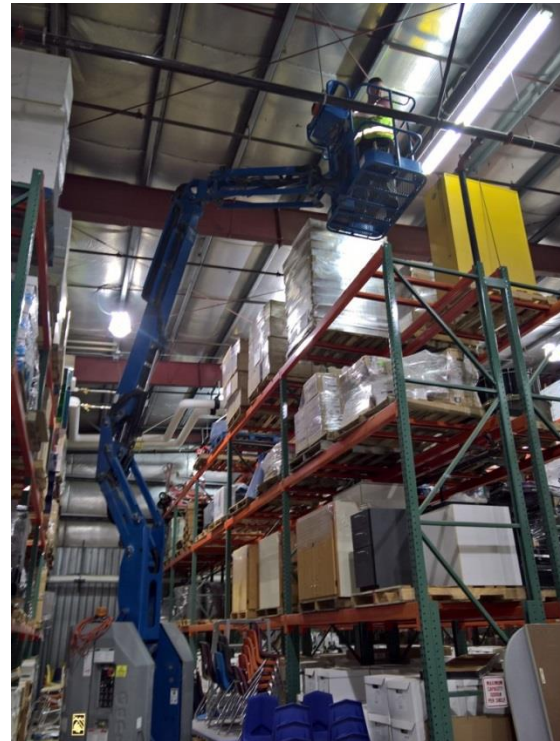
Spotlighting Success

- Student Nutrition Project
 - Anticipate 20% reduction (\$35.5K/yr) in gas & electric
 - All-steam system to hybrid steam/hydronic system
 - LED lighting & controls
 - Refrigeration equipment upgrades
- Partnering with REAP & NAACP
 - Exploring 22KW solar power system



Spotlighting Success

- In-House Efforts:
 - \$1,634,945 for energy efficiency capital projects
 - Replacing 138 T-12 light fixtures & 91 high bay HID lamps
 - Replacing T-12 light fixtures throughout district
 - Converted 19 schools to high efficiency boilers



Future/On-Going Initiatives

- Enhance energy conservation efforts through behavior modification and control systems
- Analyze data to determine baseline performance for each facility
- Districtwide lighting condition survey
- Pursuing the MOA Master Lease Program to fund energy upgrades
- Exploring Power Purchase Agreements
- Prepare for 2018 voter approval of energy financing (if needed)



Questions & Answers

