



## Project Highlight

# Chicago Public Schools, IL



## Chicago Public Schools Gains Visibility into Energy & Sustainability of District Buildings and Utility Expenses

### Technology Types:

AssetPlanner® Asset Management Software |  
Energy Procurement | Energy Price Risk  
Management | Energy Invoice Validation |  
Value-Added Analysis & Reporting

### Portfolio Size

**64M** square feet across  
nearly 1,100 buildings

### Monthly Invoices Validated

**2,700** electricity & natural gas utility  
accounts across four vendors

### Overbilling Uncovered

**\$150K** identified & corrected  
before payment

### Reduction in Overall Energy Spend

**\$4M** FY19 to FY20



### Summary

Chicago Public Schools (CPS), the third largest school system in the US, and Ameresco have been working together to ensure CPS has visibility on the energy and sustainability of its school building portfolio and financial oversight of its utility purchases and expenses.

This visibility occurs through the provision of a holistic energy management framework provided by Ameresco that includes procurement of utilities, validation of utility vendor billing, visualization of utility data and ongoing analysis of utilities including Portfolio Manager/Energy Star ratings.

This initiative is led by the Director of Energy and Sustainability for Chicago Public Schools. The Ameresco teams delivering on this solution include Supply Management and Asset Sustainability Group.



## Energy Management Framework for Chicago Public Schools

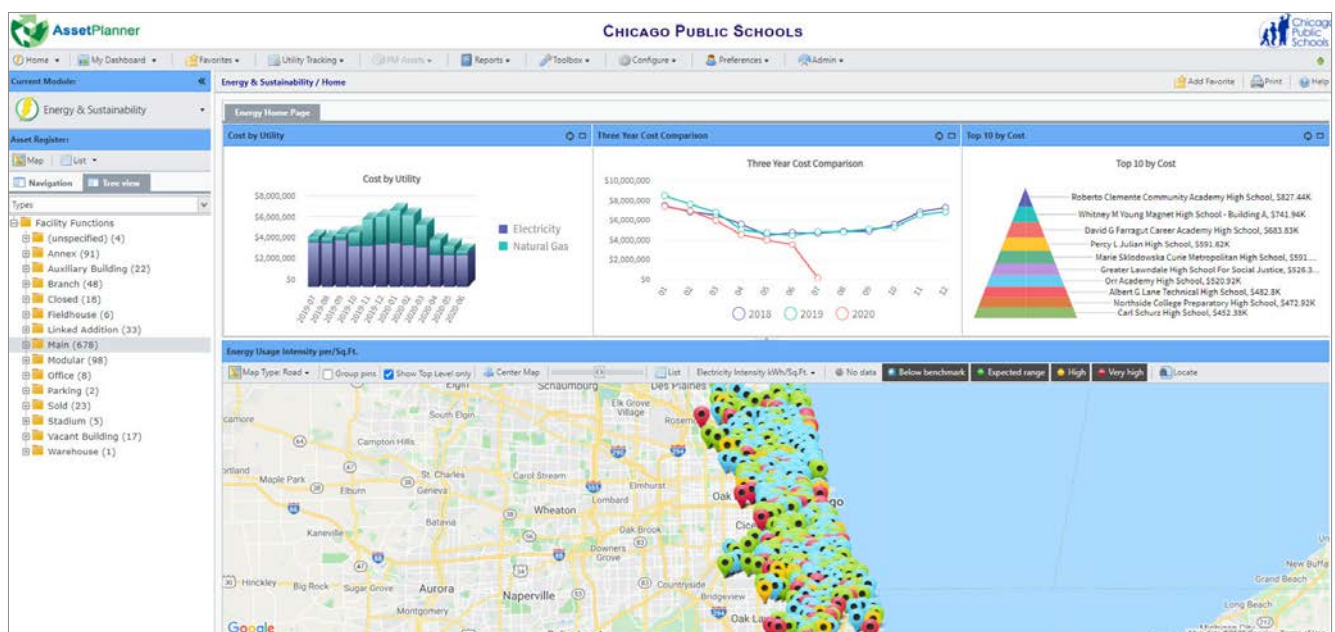
Chicago Public Schools (CPS) current portfolio includes almost 700 main school buildings followed by almost 400 additional buildings including annex's, field houses modular construction, offices, stadiums, and auxiliary buildings. The total size of the current portfolio is 64,000,000 sq ft. CPS' utility accounts and vendors include roughly 2,700 monthly invoices spanning ComEd, Constellation-Electric, Peoples Gas, Constellation-Gas.

### AssetPlanner® Energy & Sustainability Module

The holistic energy management framework provided by Ameresco includes the use of the AssetPlanner® software system. AssetPlanner® is a proprietary Ameresco software platform featuring many modules with various asset management functions.

The CPS energy management framework uses AssetPlanner's Energy & Sustainability (E&S) module. The E&S Module allows for the configuration of an 'asset register' to ensure that the entire CPS portfolio and all its complexities are captured, the establishment of utility meters and accounts connected to those buildings and finally the ongoing import all of CPS utility data to ensure all data is current, validated, and available for CPS analysis. AssetPlanner™ E&S module provides the following:

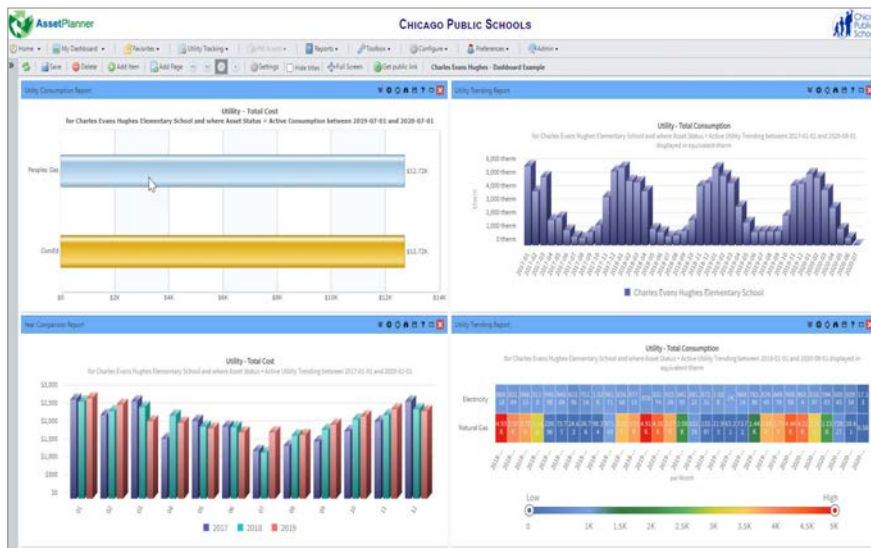
- Completely configurable asset register with the ability to report at any level of the portfolio
- Visibility and management of all utility accounts, meters and related utility data
- Historic data importing and reporting
- Standard and Ad Hoc reports (Consumption, EUI, Carbon Emissions, Savings, Trends, Variance...)
- Benchmarking (CBECS)
- Custom Reports & Public Dashboards
- Portfolio Manager / Energy Star automation





## Energy Supply Management: Procurement, Price Risk Management, Invoice Validation & Reporting

Utilizing CPS's Electricity and Natural Gas supply contracts with Constellation (who won the right to serve CPS through competitive RFP bidding overseen by Ameresco), the Ameresco team continually monitors the market, requests energy quotes for forward periods and recommends energy purchases to CPS's Chief Procurement Officer. Ameresco recommends these purchases with the goal of reducing price risk, generating savings against budget and reducing energy costs over time. Using this approach, CPS lowered overall energy spend from FY19 to FY20 by more than \$4M (5.7%) despite increases in regulated costs (e.g. ComEd and Peoples Gas delivery charges) and anticipates lowering costs further in FY21 and FY22.



**Ameresco took over Chicago Public Schools' energy bill validation and processing in 2019 and has helped clear up situations involving stray accounts, where utilities had been sending bills to the wrong addresses.**

**By correcting these problems, Ameresco has created a more comprehensive picture of CPS's total energy usage and cost obligation.**

Ameresco's proprietary bill validation models have ensured that CPS only pays exactly the amount required as dictated by the regulatory-utility tariffs in place and the provisions of executed supply contracts, and not a penny more. Since processing of CPS' invoices in Q4 of 2019, Ameresco has uncovered over \$257,000 in erroneous billed charges and prevented prior to payment. Ameresco has also helped CPS avoid approximately \$6,500 per month in ongoing late payments thanks to identifying \$630,000 in valid charges that had previously gone unpaid. These situations stemmed from the vendor billing for accounts that were not CPS', billing more than once for the same account and bill period, and bills being mailed to incorrect addresses.

Working with CPS's Director of Energy and Sustainability, speed to vendor payment has been dramatically improved and, in recognition of the revamped invoice process, vendors have credited prior late payment fees and deposits totaling \$1.25M, reducing CPS's payment obligation by this amount.

Ameresco's invoice validation has yielded high quality usage and cost billing data for all of CPS's Electricity and Natural Gas accounts with all of this data being ported to AssetPlanner each month. All the data for all of CPS' schools is available for viewing and reporting in AssetPlanner within one week of invoices being issued.



Data integration in a visualization tool is the window to new strategies and meet our goals and objectives. AssetPlanner™ just does that! In 2019, CPS expanded Ameresco's energy manager scope of work to encompass energy bill processing. Since then, the Ameresco's Supply Management team has dramatically improved the accuracy of CPS's utility and facility data resulting in savings and increased operational efficiency. Ameresco has streamlined CPS's allocation and payment process to ensure billing accuracy and timely payments. With the deployment of AssetPlanner™ to house our billing data, CPS has a software tool that provides analytical capabilities to help CPS meet and measure our Energy and Sustainability Goals across 2,600 electricity and natural gas accounts and provides our stakeholders with actionable information to develop our energy projects.



Sandrine Schultz  
Director of Energy and Sustainability  
Chicago Public Schools



## Benefits

Ameresco's AssetPlanner™ software system and Energy Supply Management services have provided CPS the following benefits:

- Validated asset registry
- Ease of access to buildings & utilities data
- Highlight data gaps and data inconsistencies
- Improved accuracy of utility and facility data
- Increased savings and operational efficiency
- Visibility to actionable information via Reports and analysis



This wealth of high quality, quick turnaround data has allowed Ameresco to assess and provide feedback to CPS facility managers on the effectiveness of their efforts to reduce energy consumption following school closures on March 17, 2020 due to the COVID-19 pandemic. Ameresco has been able to quantify for CPS the reduction in electricity usage associated with school closure, after adjusting for heating degree days (HDD) and cooling degree days (CDD). The analysis suggests that efforts at the schools have resulted in an average 17% reduction in electricity consumption across the portfolio in the 3-1/2 months since schools were closed. This reduction is over and above what would be expected under conditions of "normal" school out of session situations (weekends, holidays, and vacations) and after adjusting for temperature. Furthermore, results have improved each month. Results vary by school and Ameresco has been able to document this for CPS as well.

Ameresco's team of energy experts can assist you in identifying the solution that fits your needs.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please call **1-866-AMERESCO** or visit **ameresco.com**.

