Getting Started with Procurement & Managing and Analyzing Data

Module 1 in the "Procurement Strategies for K-12 Facility and Energy Managers" Course

January 4, 2024

Today's Agenda

- Welcome and Introductions
- Learning Objectives
- **Getting Started with Procurement**
  - Summary of Pre-Survey Responses
  - Introduction to Procurement Strategies
    - Key Terms & Approaches
    - Integration of Organizational Energy/GHG Goals
    - Discussion Examples: Developing Scopes of Work for Energy Projects
  - Guest Speaker: Odette Mucha, DOE SCEP
- **Managing and Analyzing Data**
  - Types of energy management software
  - Use Cases
  - Procurement
  - Guest Speaker: Lyndl Schuster, River Trails School District 26
- Key Resources
- Conclusion: Assignment and Q&A

Course Instructors

Susan Elliott

John Jameson

Adam Agalloco

Today's Presenters

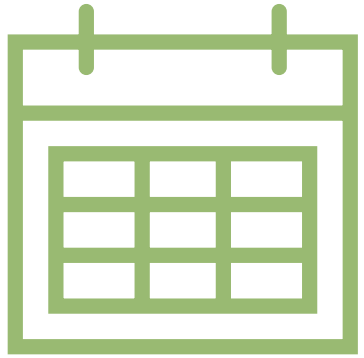
Susan Elliott and John Jameson

Susan Elliott is a Climate Planning Consultant at ICF with expertise in supporting state and local government efforts on climate change mitigation and decarbonization. Susan brings over 10 years of program management experience in local government, working with organizational partners to identify and develop projects and programs to reduce greenhouse gas emissions within the municipal footprint and community. Her work has included working with cross-organizational partners to assess projects, identify opportunities to advance multiple program priorities, and evaluate and recommend funding/financing and process pathways for implementation.

John has over 10 years supporting local governments and education institutions in building energy efficiency. He has supported numerous local, state and federal energy programs including DOE's Better Buildings Initiative where he's worked with DOE national laboratories to provide technical assistance to partners across the country. He currently oversees EPA's ENERGY STAR building certification program.

Overview of the Procurement Strategies Course

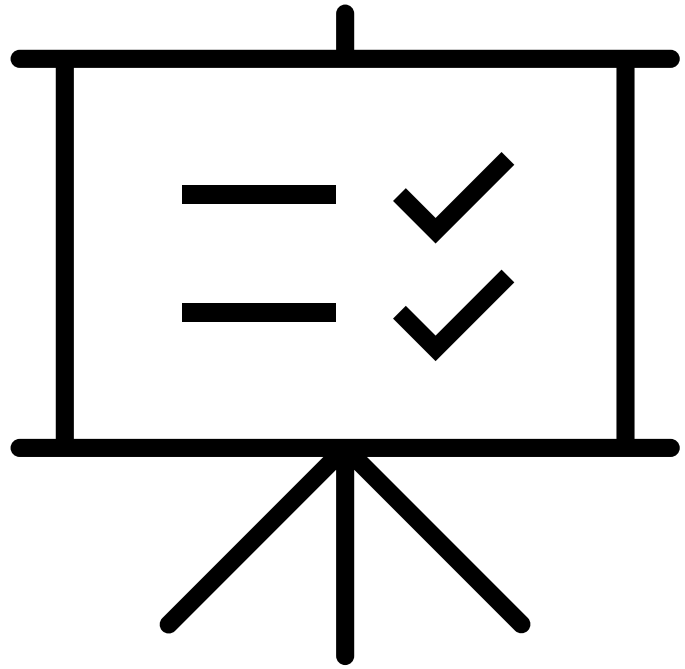
- **January 04, 2024:**
  Getting Started + Managing and Analyzing Data
- January 11, 2024:
  Energy Procurement + Energy Project Procurement
- January 18, 2024:
  Financing Approaches + Applications to Achieve Your Goals
- January 23, 2024 (**3PM – 4PM Eastern**):
  Procurement Strategies Cohort Meeting



Sessions will take place from 3:00 – 5:00 PM (Eastern) unless otherwise noted

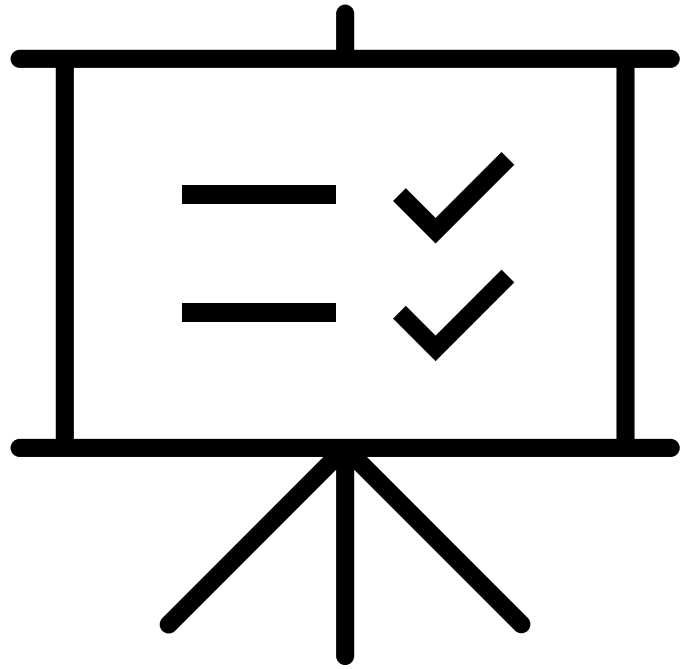
Learning Objectives

- In Part 1 of today's session, attendees will:
  - Develop an understanding of the basics of energy service procurement, including terminology and the technical aspects of relevant systems and equipment
  - Learn how to define organizational energy and/or greenhouse gas (GHG) emissions goals and combine them into an overall energy procurement strategy and program for a K-12 district
  - Learn about developing scopes of work for energy projects



Learning Objectives

- In Part 2 of today's session, attendees will:
  - Learn how to characterize different types of energy management systems
  - Learn the role it can play in helping achieve and maintain energy savings
  - Learn how to procure it



Part 1 Getting Started with Procurement

Pre-Survey Responses

Project Focuses

- Solar
  - Behind the meter – owned/operated
  - Large-scale rooftop
- GSHP – expensive, low ROI, high environmental benefits
- Operational changes to produce energy & cost savings (ex. air flow and air unit temperatures)
- Inflation Reduction Act (IRA) opportunities

Pre-Survey Responses

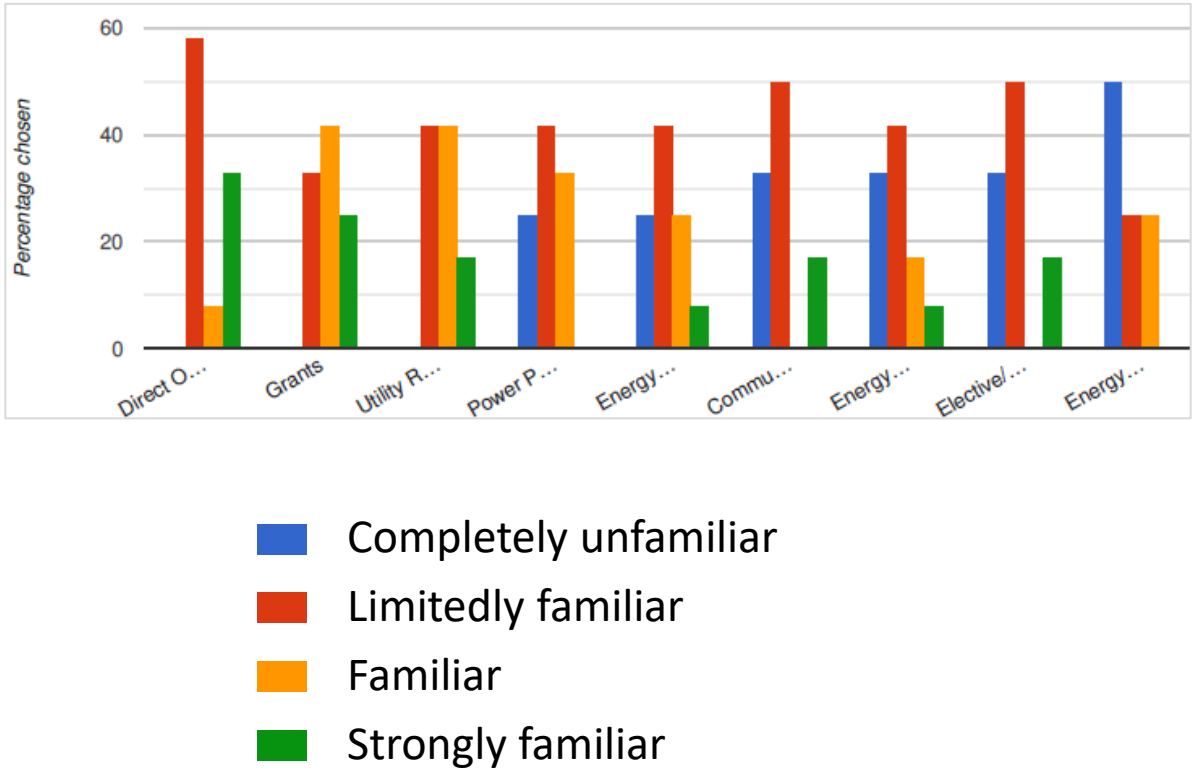
Most interested in

- Energy Saving Performance Contracts (ESPCs)
- Section 179D, Elective Pay
- Utility rebates and power procurement
- Power Purchase Agreements (PPAs)
- Experience with subsidies, grants, incentives
- RFP Creation
- All strategies

Pre-Survey Responses

Strategy Familiarity

- **Limited familiarity across all strategies (red)**
- **Completely unfamiliar responses (blue)**
  - Power Purchase Agreements
  - Energy Savings/Energy Performance Contracts
  - Community Solar
  - Elective/Direct Pay & Transferability
  - Energy Efficiency Commercial Building Deduction (179D)
- **Familiarity (orange)**
  - Grants
  - Utility Rebates and Incentives
  - Power Purchase Agreements
  - Energy Efficiency Commercial Building Deduction (179D)
  - Energy Savings/Energy Performance Contracts
- **Some strong familiarity across most strategies (green)**



Pre-Survey Responses

Experience with Strategy Deployment

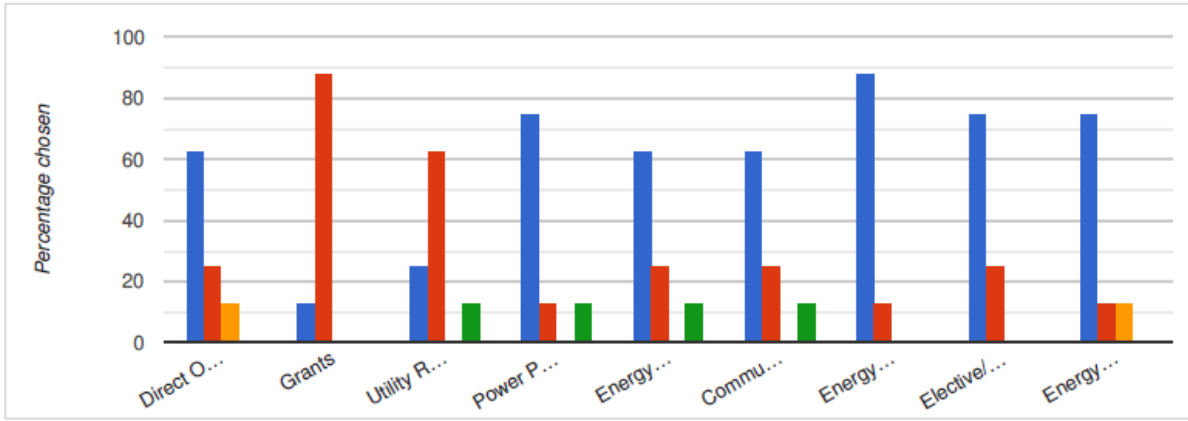
Most Experience

- Grants
- Utility Rebates and Incentives

Least Experience

- Energy/Energy Savings Performance Contracts
- Elective/Direct Pay & Transferability
- Energy Efficiency Commercial Building Deduction (179D)
- Power Purchase Agreements
- Community Solar
- Direct Organizational Capital (Tax Revenue, Bonds, Loans)

- Do not have experience with this strategy
- Have deployed this strategy
- Have selected and not yet deployed this strategy
- Have fully evaluated and discarded this strategy for deployment



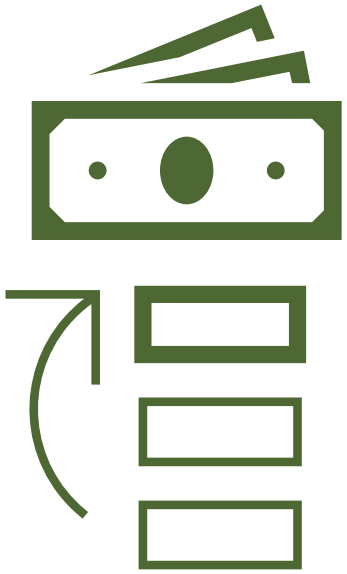
Introduction to Procurement Strategies

Key Terms

- Capital Stack
- Tax Credits (including elective/direct pay and transferability)
- Debt Service (loans and bonds)
- Bond Rating
- Utility Rate Schedule
- Energy as a Service (EaaS)
- Power Purchase Agreements (PPAs)
- Energy Savings Performance Contracts (ESPCs)

Introduction to Procurement Strategies

Procurement Strategies are a collection of approaches to make obtaining project funding more manageable and more feasible. They can include:



- Funding
  - Direct organizational capital (tax revenue, bonds, loans, leases)
  - Grants
- Reducing project costs
  - Tax and other credits
  - Utility rebates and incentives
  - Scale efficiencies
- Contract structures

  (*aligning payment with savings)*
  - Power Purchase Agreements (PPAs)
  - Energy as a Service (EaaS)
  - Energy Savings Performance Contracts (ESPCs)

Integration of Organizational Energy/GHG Goals

- What are your organization's needs and goals?
  - Minimize project unit costs
  - Maximize GHG emissions reductions
  - Maximize savings
  - Achieve greater scale quicker
  - Reduce impacts on staff workloads
  - Fit project costs within existing expenditures

Discussion:
Developing Scopes of Work for Energy Projects

Guest Speaker

Today's Guest Speaker

Odette Mucha

Technical Assistance Lead for the

Energy Efficiency and Conservation Block Grant Program

US Department of Energy
State and Community Programs Office

Odette.mucha@hq.doe.gov

The Energy Efficiency and Conservation Block Grant (EECBG) Program Directly Invests in Over 2,700 Communities Across U.S.

Eligible state, local, and Tribal governments can now apply for $430M in funding from the Energy Efficiency and Conservation Block Grant (EECBG) Program!

Eligible entities can use flexible EECBG Program funding for projects and programs that

Cut Carbon Emissions

Improve Energy Efficiency

Reduce Energy Use

SCEP
STATE & COMMUNITY ENERGY PROGRAMS

States can apply for EECBG Program formula funding through July 2023.
Local governments and Tribes can apply through January 2024.

Opportunities to Collaborate with EECBG

Most of your cities/counties are eligible for EECBG Grants (2023 allocations)

- Baltimore City, MD: $549,550
- Bennington, VT: $75,560
- Brevard County, FL: $340,910
- Charlottesville, VA: $76,840
- Cleveland, OH: $386,700
- Decatur, GA - EECBG Competitive award: $400,000
- Detroit, MI: $582,030
- Grafton County, NH: $78,280
- Inglewood, CA: $153,020
- Irvington, NJ: $116760
- Jackson County, MS: $79,900
- Kansas City, KS $197,600
- Lansing, MI: $168,150
- McCracken County, KY: $77,450
- Milwaukee, WI: $522,370
- Nenana, AK. EECBG Competitive award: $900,000
- Orange County, FL $807,430
- Salt Lake County, UT: $80,390
- San Antonio, TX: $1,220,460
- Spokane, WA: $255,210
- Walworth County, WI: $78,630
- Weslaco, TX: $76,470

EECBG Blueprints and Cohorts

Blueprint Topics

1. Comprehensive Energy Planning
2. Energy Efficiency
   - Energy Assessments and Building Upgrades,
   - Energy Savings Performance Contracts,
   - Building Electrification Campaign,
   - Building Performance Standards & Stretch Codes
3. Renewables
   - Solar PPAs and Direct Ownership,
   - Solarize Campaign,
   - Community Solar,
   - Renewable Resource Planning for (rural and tribal) communities
4. Transportation
   - Electric Vehicles for Fleets & Fleet Electrification,
   - EV Charging Infrastructure for the Community
5. Financing Solutions – Revolving Loan Funds
6. Workforce Development

Blueprint Cohorts will meet virtually on an ongoing basis to:

- Ask and answer questions
- Provide updates
- Share experiences
- Hear from experts
- Troubleshoot common areas of concern
- Participate in tool demonstrations
- Share success stories

Sign up here to join a Blueprint Cohort:
https://forms.office.com/g/Phr3DWKiwJ

See the Blueprint Resources here:
https://www.energy.gov/scep/energy-efficiency-and-conservation-block-grant-program-blueprints

PAST EVENTS

- Justice 40
- Community Engagement Best Practices

Tool Trainings

- Solar PV Tools: System Advisor Model (SAM) and PV Watts
- RE-Opt Energy Integration and Optimization Tool
- State and Local Planning for Energy
- Low-Income Energy Affordability (LEAD)

Find slides, worksheets and the webinar recordings here: https://www.energy.gov/scep/energy-efficiency-and-conservation-block-grant-program-blueprints

UPCOMING EVENTS

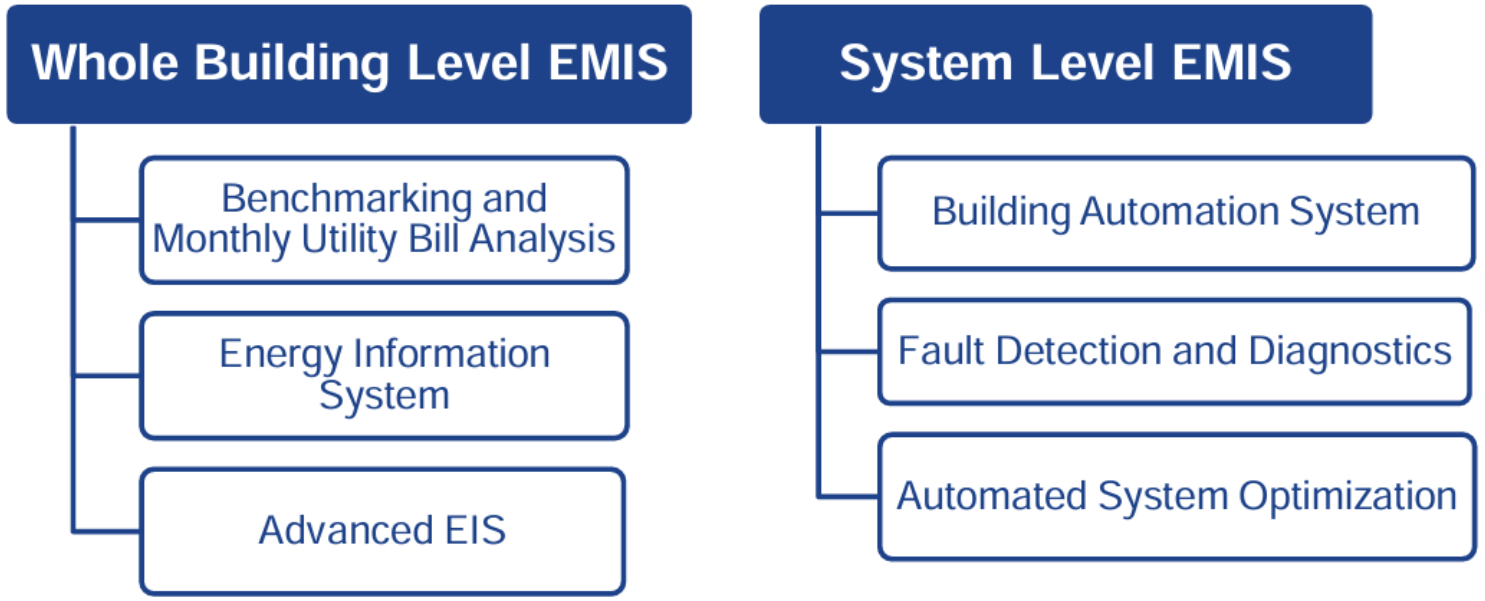
- **Federal Funding Roundtable**
  January 18th from 2-3:30 PM ET. Click here to register.
  - Hear from the DOE representatives on the DOE's $8.8 Billion Home Energy Rebates Program, Building Energy Codes Technical Assistance Program, Energy Saving Performance Contracting Campaign, and more!
- **Financial and Development Pathways Training**
  January 25th from 2-3:30 PM ET. Click here to register.
  - Learn more about financing strategies for a range of clean energy initiatives. Beginning with a brief overview of project development and financing, it will address public and private funding sources, ownership models, and key considerations to help practitioners choose among different approaches.
- **Financing Upfront Capital and Revenue**
  February 8th from 2-3:30 pm ET. Click here to register.
  - This training will provide a basic introduction to the options for financing a clean energy project as well as for recovering the investment and generating revenue from the project.
- **ResStock™ Analysis Tool Training**
  February 22nd from 2-3:30 p.m. ET Register here.
  - ResStock is an analysis tool that can help users identify which residential building improvements save the most money and energy.

Part 2 Managing and Analyzing Data

Beyond Benchmarking: Energy Management Information Systems

Energy Management Information Systems

EMIS are a broad family of tools to monitor, analyze, and control building energy use and system performance



* The boundaries can be fuzzy; some tools cross categories, e.g., energy information systems with FDD and benchmarking capabilities

J. Granderson, Lawrence Berkeley National Laboratory

Types of Energy Management Information Systems

TABLE 1: KEY CHARACTERISTICS OF EMIS TECHNOLOGIES

	Monthly Data Analytics	EIS	FDD	ASO
Primary Applications	Utility bill reconciliation, energy use and cost tracking; peer-to-peer building comparisons of energy use	Whole-building or portfolio energy tracking at an hourly data level; data visualization	Automated identification of system-level faults, often with associated causes, usually HVAC focused	Automated modification of control parameters to optimize efficiency, energy use, and/or energy costs
Benefits	Provides insight into whole-building energy performance; assists in streamlining bill payment processing and/or tenant billing	Provides granular energy consumption history and summary of use patterns; notifies user when energy exceeds expectation	Early identification of faults can prevent mechanical failure, extending equipment life; Faults flag energy waste for specific equipment	Dynamically change HVAC settings to optimize energy use and comfort
Frequency of Use	Monthly, annually	Daily, weekly, monthly	Daily, weekly, monthly	Instantaneously with review weekly or monthly
Typical Data Scope	Whole building or campus	Whole building, may include submetering and system-level monitoring	BAS data including central plant, AHUs, and zone-level data	Systems, components, BAS trends; may include whole-building or system-level submetering
Typical Data Interval	Monthly	Hourly to 15-minute	15-minute and less	15-minute and less
Energy Savings	2.4% average annual energy savings[a]	3% median annual energy savings ($0.03/sq ft)[b]	9% median annual energy savings ($0.24/sq ft)[b]	Depends on system type Case study: 0%–9% energy savings[c]
Costs	Free or low cost[d]	Base: $0.01/sq ft Annual: $0.01/sq ft[b]	Base: $0.06/sq ft Annual: $0.02/sq ft[b]	Depends on base HVAC system configuration

Primer on Organizational Use of EMIS, LBNL

Source: https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/energy-information-handbook.pdf

Metering and Expertise Required for Analysis

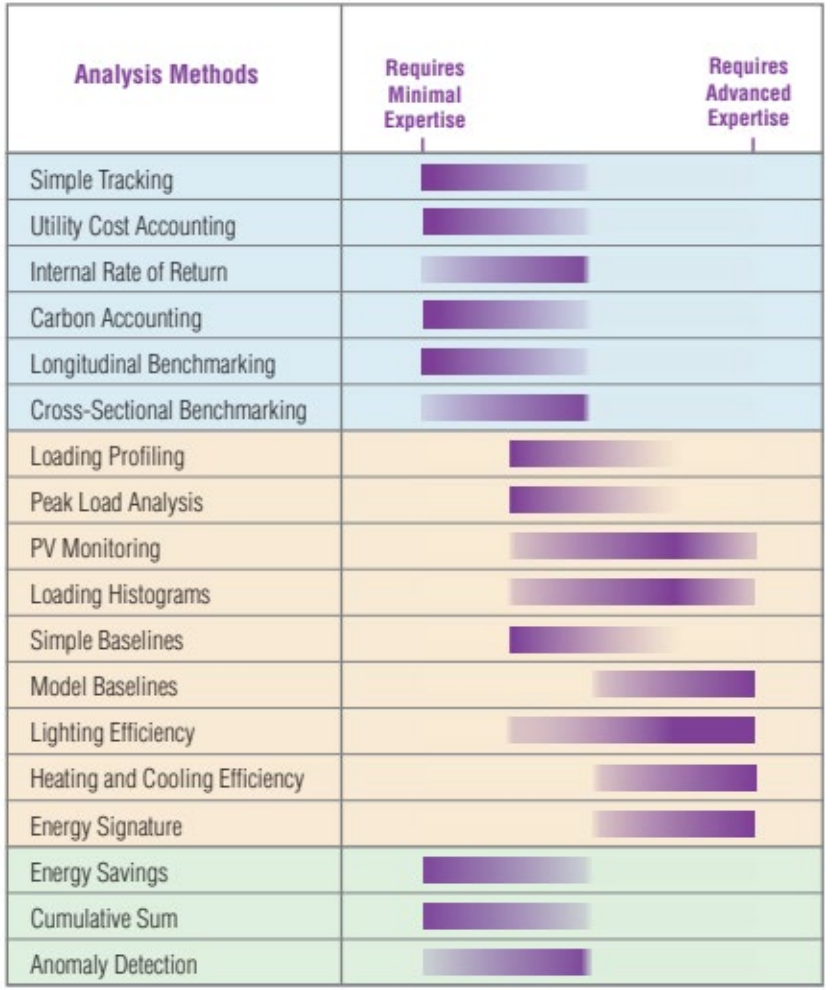
Minimum Data Requirements

Analysis Methods	Utility		Interval Meter		Submeter			Other*
	Gas	Electric	WB Gas	WB Electric	Heating Load	Cooling Load	Lighting Load	
Simple Tracking	●	●						
Utility Cost Accounting	●	●						
Internal Rate of Return	●	●						●
Carbon Accounting	●	●						●
Longitudinal Benchmarking	●	●						●
Cross-Sectional Benchmarking	●	●						●
Loading Profiling			●	●				
Peak Load Analysis				●				
PV Monitoring								●
Loading Histograms					●	●		
Simple Baselines	●	●						●
Model Baselines			●	●				●
Lighting Efficiency							●	●
Heating and Cooling Efficiency					●	●		●
Energy Signature	●	●						●
Energy Savings	●	●						●
Cumulative Sum	●	●						●
Anomaly Detection			●	●				●

WB = whole-building.

*Other includes for example, weather data, square footage, or equipmment costs.

Interpretation of Method Output



Data Requirements for Analysis

TABLE 3: EXAMPLE DATA REQUIREMENTS FOR EMIS-RELATED ACTIVITIES

Activity	Data Type	Minimum Resolution
ENERGY STAR Portfolio Manager Benchmarking	Whole-building energy use	Monthly
	Gross floor area, ZIP code, building type, year of construction, # of occupants, # of computers	Static information, updated as needed
Utility Bill Validation	Utility bills; EMIS-metered whole-building or account-level energy use and demand	Monthly (from utility bills) or hourly (if interval data are available)
	Utility tariff	Static information, updated as needed
Portfolio-specific Benchmarking	Whole-building energy use	Annual
	Gross floor area, ZIP code, building type, and year of construction	Static information, updated as needed
Measurement and Verification	Energy and demand; Weather condition (outside air temperature or degree days)	Based on depth of savings and M&V accuracy requirements. Monthly, hourly, and sub-hourly data may be used depending on data availability
Demand Management	Whole-building electric	15-minute
Greenhouse Gas (GHG) Tracking	GHG emission conversion factors	Static information, updated as needed
	Energy use	Monthly
Whole-Building Load Profiling	Whole-building energy use	Hourly or sub-hourly
Energy Tracking of Major Energy Consuming Equipment	Submetered energy use at the end-use or equipment level	Hourly or sub-hourly
Energy Anomaly Alarming	Energy use; Weather conditions (outside air temperature)	Hourly or sub-hourly
System/Equipment Fault Identification	Depends on the targeted system; usually includes temperature, flow rate, on/off status, and pressure sensor data	15-minute or a shorter interval
Regular Reporting	Depends on the reporting requirement, energy and demand for consumption-related reports, prioritized issues for operation-related reports	Depends on the reporting requirement

Primer on Organizational Use of EMIS, LBNL

Polling Break

- What temporal energy data are available to you?
  - Monthly
  - Weekly
  - Daily
  - Hourly
  - Sub-hourly

- What granularity of energy data are available to you?
  - Building level
  - System level (e.g., HVAC, lighting, etc.)
  - Room level
  - Plug level
  - I don't know

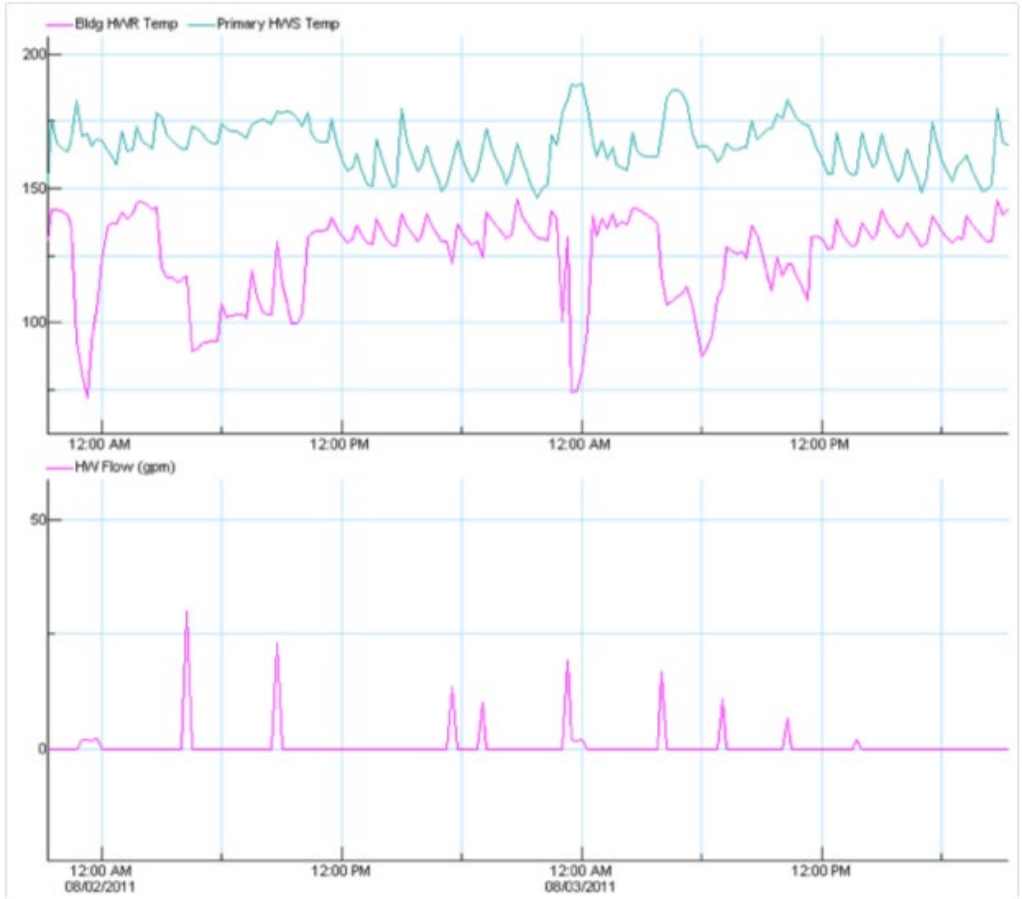
Energy Management Tools & Platforms

Polling Break

- Does your District already have a building automation systems (BAS) in place?
  - Yes, in all schools
  - Yes, in some schools
  - No, not yet
  - I don't know

Building Automation Systems (BAS)

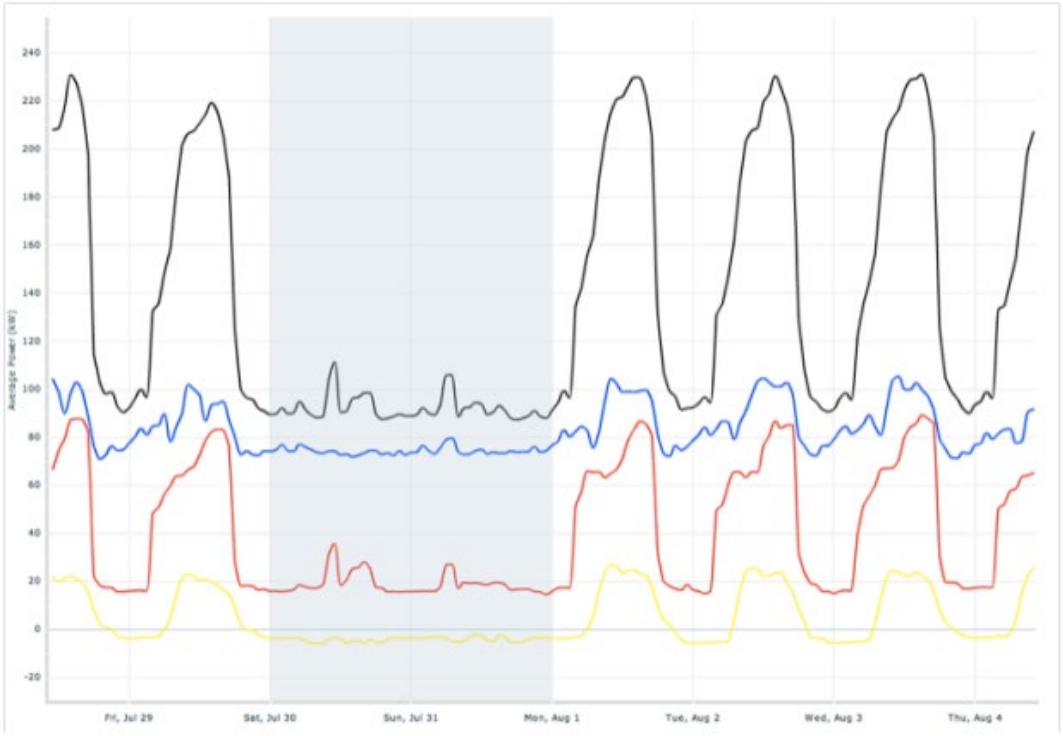
- System designed to control building operations and indoor climate
- Store, trend and plot system-level operational or control data including setpoints, temperatures and equipment status
- Can export data for further analysis
- Higher upfront cost, large savings



Source: Lawrence Berkeley National Laboratory

Energy Information Systems (EIS)

- Software, sensors and communications systems used to store, analyze and display building data
- Commonly include interval data on electricity and gas at whole-building or submeter level
- Can also be exported for further analysis



Source: Lawrence Berkeley National Laboratory

Fault Detection and Diagnostics (FDD)

- Consists of 3 processes:
  - Fault detection: Determining a fault has occurred in system
  - Fault isolation: Determining specific fault occurred including type, location, and time of detection
  - Fault identification: Determining size and time-variant behavior of a fault
- Can detect problems that otherwise may have lingered for months
- While many building performance problems are compensated automatically by controls, there is an energy/cost penalty

FIGURE 7: FAULT PRIORITIZATION EXAMPLE FROM AN FDD TOOL

Top 5 Issues

Energy

Building	Equipment	Notes	Cost/Qtr.
Anon Hospital	AHU_6_CAVs	Low Damper Position – opportunity for static pressure reset.	$11,120
Anon Hospital	AHU_11	No supply temp reset. Cooling valve issues.	$7,778
Anon Hospital	AHU_6	No supply temp reset. Cooling valve issues.	$6,163
Anon Hospital	AHU_5	Supply temp lower than setpoint. No supply temp reset. Cooling valve issues.	$5,029
Anon Hospital	AHU_4	Supply temp lower than setpoint. No supply temp reset. Cooling valve issues.	$4,318

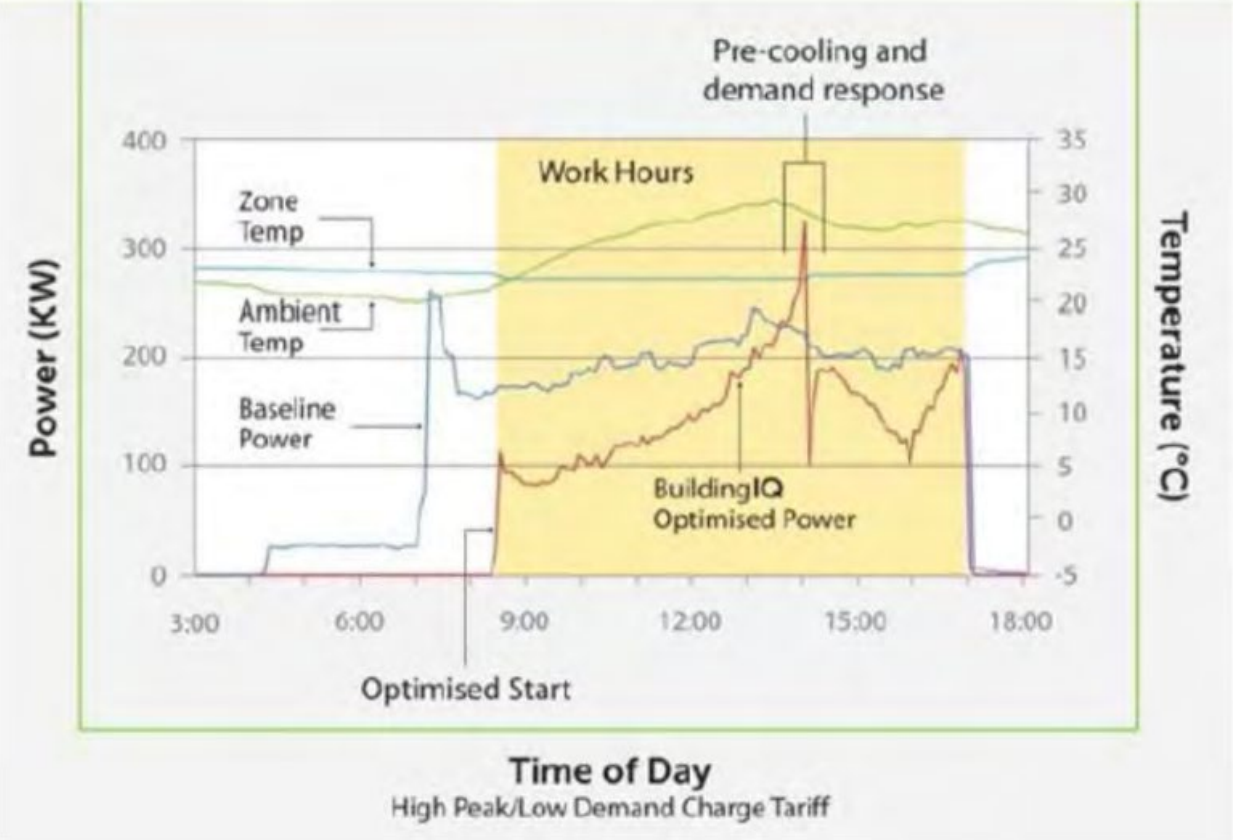
Maintenance

Building	Equipment	Notes	Severity Priorty
Anon Hospital	AHU_11	Static pressure lower than setpoint. Supply fan speed constant. Return fan speed constant.	6
Anon Hospital	AHU_10	Static pressure lower than setpoint. Supply fan speed constant.	6
Anon Hospital	CAV8_2	Room temp lower than setpoint. Stuck reheat valve.	4
Anon Hospital	CAV5_82	Supply flow lower than setpoint. Stuck reheat valve. – May be sensor error.	4
Anon Hospital	CAV3_11	Sensor error. Stuck reheat valve.	4

Source: EMIS Primer, Lawrence Berkeley National Laboratory

Automated System Optimization (ASO)

- Continuously analyzes and modifies BAS control settings to optimize heating, ventilation, and air conditioning (HVAC) system energy usage while maintaining occupant comfort
- Two-way communication with the BAS distinguishes ASO solutions from FDD.
- Generally, focus on optimizing chilled water plant and air handling unit (AHU) reset strategies based on outdoor conditions.
- May determine a day-ahead optimal start time for a chilled water plant based on weather and load forecasts, with an objective to minimize total plant energy use.



Source: Hudson Pacific Properties, 2019

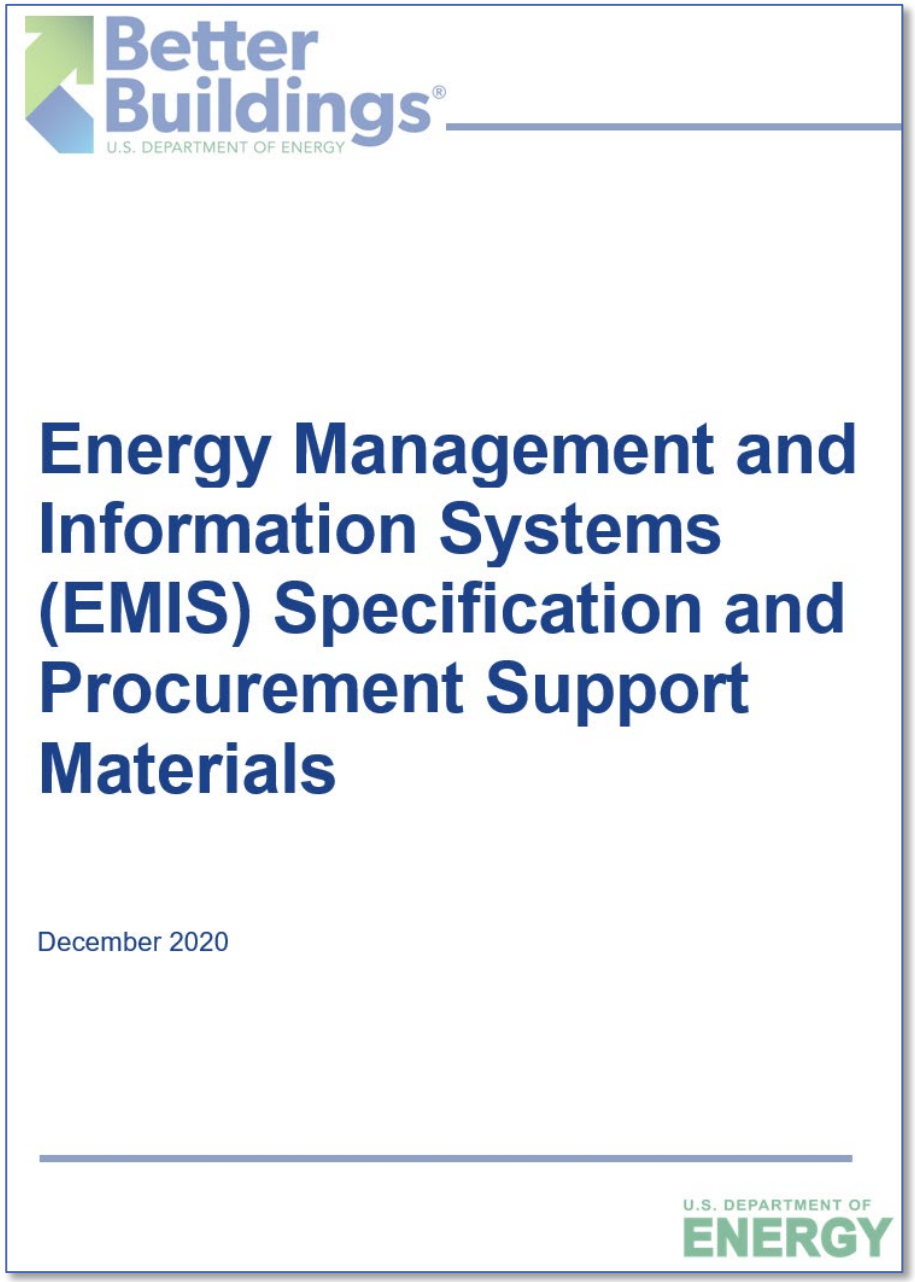
Energy Management Information System Procurement

Elements of EMIS System Costs

Table 6. Key elements of EMIS costs

Cost Items			Description
EMIS Implementation Costs	A: Base costs for EMIS technology	A.1: Hardware costs	Costs for hardware installation and upgrade (e.g., adding meters and sensors during the project for EMIS monitoring purposes, installing gateways for communication, getting data servers for data storage)
		A.2: Software costs	Costs for the EMIS software installation and configuration to bring in all the data points, alteration of the existing BAS to expose legacy data points, and training to site staff, including EMIS vendor and service provider costs
	B: In-house labor costs for EMIS installation and commissioning		Approximate total labor costs spent by in-house staff to support installation and configuration of the EMIS
Ongoing Annual EMIS Operating Costs	C: Ongoing annual costs for EMIS technology	C.1: Annual EMIS costs	The recurring annual cost for a software license, software-as-a-service fees, or hardware (e.g. occupancy counters)
		C.2: Annual third-party consultant costs	The average annual cost paid to a third-party consultant for support in analyzing and implementing EMIS findings
	D: Ongoing annual in-house labor costs for EMIS use		Approximate labor costs spent by in-house staff reviewing EMIS reports, identifying opportunities for improvement, and implementing measures (may be based on average hours spent per month)

EMIS Field Evaluation Protocol, LBNL:
https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/EMIS_evaluation_protocol.pdf



https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/EMIS%20Specification_LBNL_Dec2020.docx

EMIS Spec & Procurement Template

- A Request for Proposals (RFP) Template that can be filled out to create an organization- and project-specific RFP for vendors.
- An EMIS Technology Specification (Section 2) that can be tailored to generate owner-driven requirements for technology features and capabilities, data integration, and maintenance support.
- An Ongoing Services Specification (Section 3) that can be tailored to generate owner-driven requirements to support in-house staff beyond the EMIS installation period. If the EMIS will be utilized exclusively by in-house staff and ongoing service provider support, the services specification can be omitted.
- Additional sections to define the proposal format, eligibility, and evaluation approach. Appendices provide additional support for developing your RFP, including a table that can be used to summarize the owner's requirements and options with respect to the Technical Specification.

https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/EMIS%20Specification_LBNL_Dec2020.docx

Team Members

The table below illustrates what a team could look like for EMIS procurement and deployment

Table 1. Team Members

Title	Role
Energy Manager	Manages the EMIS project, oversees planning and implementation of the EMIS, and communicates progress and outcomes to management.
Building Engineer	Familiar with the building's control system and architecture. Assists with EMIS installation by answering questions from the EMIS provider around existing system configuration. Involved in the selection of analytics and FDD rules to apply to the systems.
IT Representative	Supports EMIS setup regarding IT networks, data transfer processes, and network cybersecurity.
Environmental Health & Safety Representative	If the equipment to be monitored includes specialty equipment that requires additional support, the EH&S representative will provide input.
EMIS Provider	The EMIS provider serves as the system integrator and is responsible for setting up data transfer and configuring and commissioning the EMIS according to this specification. The EMIS provider leads the training and hand-off to the energy manager, building engineer, and MBCx services provider.
(MBCx) Services Provider	The service provider may support the EMIS provider during EMIS installation, or they may be the same company as the EMIS provider. The service provider is responsible for the services in Section 3, and typically works with the building engineer to implement findings.

https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/EMIS%20Specification_LBNL_Dec2020.docx

Specifying BAS Data Integration

The sample language below is important to ensure communication between existing/new software and hardware

2.1.3 Building automation system (BAS) data integration

The technology will extract data from the building control systems for FDD functions. *[Note specific building control systems existing at facilities. Indicate whether the EMIS will also provide supervisory control of building automation systems for automated system optimization purposes (See Section 2.5).]*

- The data collection interval will be selected to meet the needs of the FDD software and is compatible with BAS trending, with 15-minute interval data being the most implemented. Change of value and/or slower polling rates may be needed to reduce network burden on the control system, and the effect of data collection interval on network speed will be determined during FDD setup. Slower or faster polling rates may also be implemented based on the type of fault (e.g., hunting and cycling faults may need one- to five-minute interval data).
- Integration with non-legacy vintages of BAS providers will occur via common protocols such as BACnet and Modbus, or through the BAS vendor's gateway. If the BAS does not support BACnet, a data gateway or protocol converter will need to be installed by the EMIS vendor.
- *[Either all BAS data or a subset of available BAS data may be integrated into the EMIS. Owners that wish to limit the scope to specific systems should edit this section to indicate their preferences here.]* BAS data will be integrated as follows:
  - These data include: [chiller/boiler plant data, air handler data, and zone device data].
  - Integration will include but not be limited to [energy meter data already connected into the BAS, equipment status, setpoints, valve/damper control signals, fan speed, air flow rate, pump water flow rate, and air and water temperatures].
- Near-real time data polling or end of day batch uploads to the EMIS are acceptable.
- The data integration will not adversely affect the speed of the existing BAS control or visualization functions.

https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/EMIS%20Specification_LBNL_Dec2020.docx

Guest Speaker

Today's Guest Speaker

Lyndl Schuster

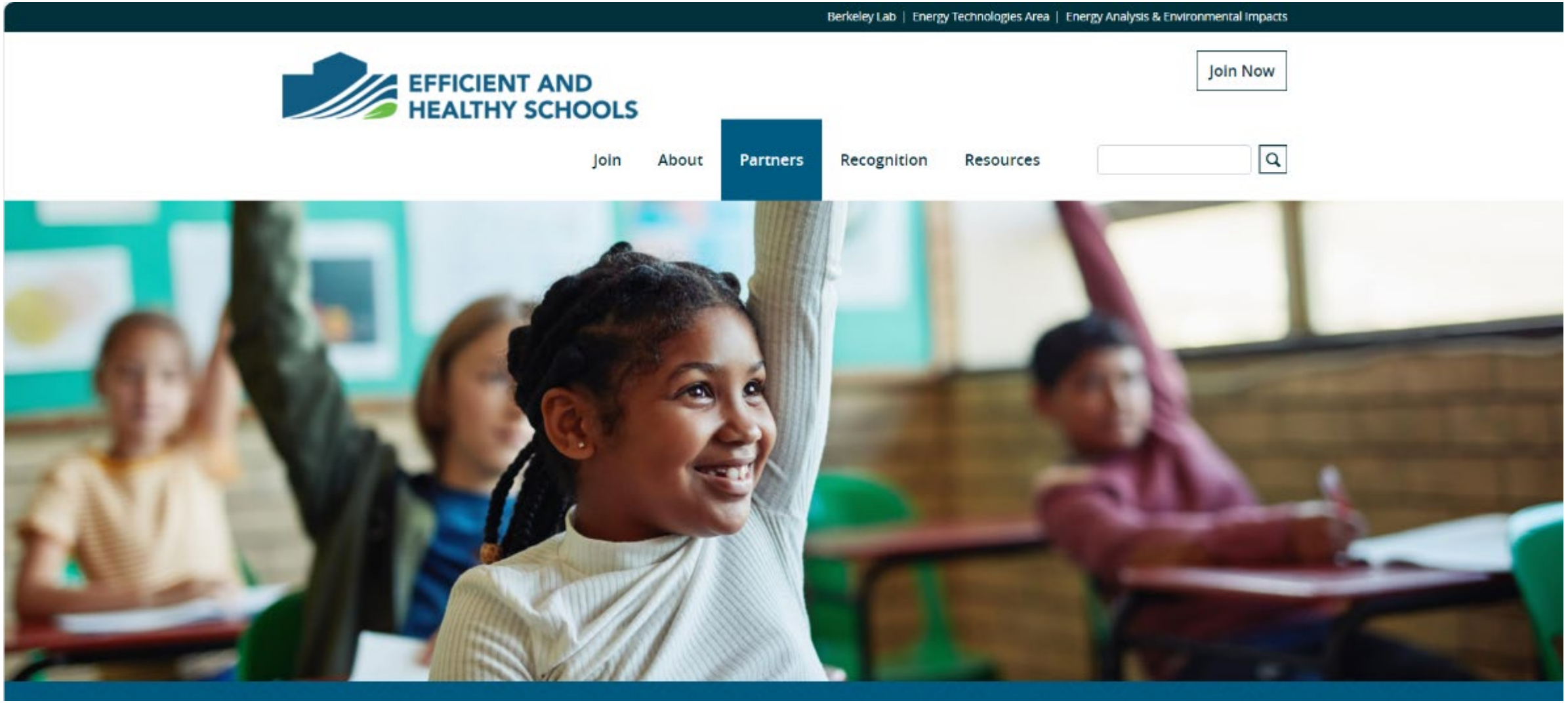
Assistant Superintendent for Business Services

River Trails District 26

Dr. Lyndl Schuster has served as the assistant superintendent for business services at River Trails District 26 since August 2006. She holds a B.S. and an M.S. in management with a concentration in finance from the Massachusetts Institute of Technology, Sloan School of Management, in Cambridge, Massachusetts. She attended the School Business Management program jointly sponsored by Northern Illinois University and Illinois Association of School Business Officials and received her Chief School Business Officials endorsement in 2003. In 2016 she received her doctorate, educational leadership and superintendent endorsement from Western Illinois University. Dr. Schuster is passionate about the environment and leads the district's sustainability efforts as well as the District Wellness Committee, which focuses on employee and student health and wellness as well as environmental wellness. She believes that education holds the key to life-long success and her goal is to ensure that every student is inspired to learn and to reach their maximum potential while District 26 maintains financial stability.

Key Resources

DOE/LBNL Efficient and Healthy Schools

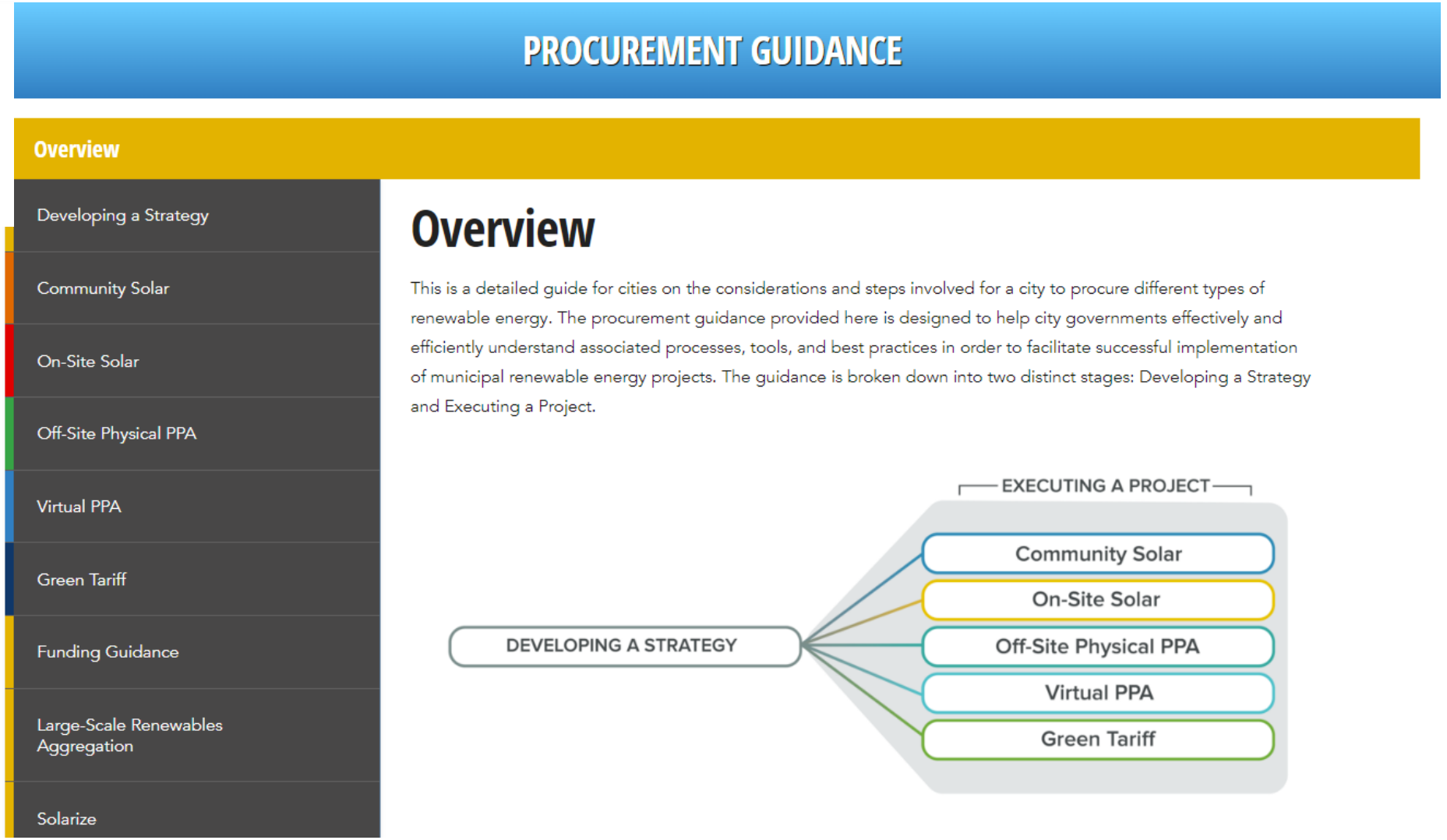


https://efficienthealthyschools.lbl.gov/

American Cities Climate Challenge: Procurement Guidance

American Cities Climate Challenge
RENEWABLES ACCELERATOR

- Tools
- Resources
- Guidance
- Glossary of Terms



Overview - American Cities Climate Challenge (cityrenewables.org)

EECBG Blueprints and Cohorts

Blueprint Topics

1. Comprehensive Energy Planning
2. Energy Efficiency
   - Energy Assessments and Building Upgrades,
   - Energy Savings Performance Contracts,
   - Building Electrification Campaign,
   - Building Performance Standards & Stretch Codes
3. Renewables
   - Solar PPAs and Direct Ownership,
   - Solarize Campaign,
   - Community Solar,
   - Renewable Resource Planning for (rural and tribal) communities
4. Transportation
   - Electric Vehicles for Fleets & Fleet Electrification,
   - EV Charging Infrastructure for the Community
5. Financing Solutions – Revolving Loan Funds
6. Workforce Development

Blueprint Cohorts will meet virtually on an ongoing basis to:

- Ask and answer questions
- Provide updates
- Share experiences
- Hear from experts
- Troubleshoot common areas of concern
- Participate in tool demonstrations
- Share success stories

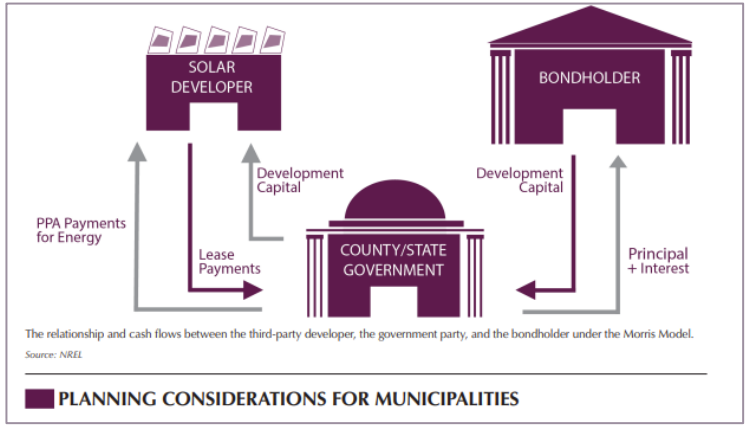
Sign up here to join a Blueprint Cohort:
https://forms.office.com/g/Phr3DWKiwJ

See the Blueprint Resources here:
https://www.energy.gov/scep/energy-efficiency-and-conservation-block-grant-program-blueprints

Key Resources

- HUD Exchange
  - Renewable Energy Resources - Case Studies

- Center for Climate and Energy Solutions
  - Buying Clean Electricity: How Cities Benefit from Power Purchase Agreements



The relationship and cash flows between the third-party developer, the government party, and the bondholder under the Morris Model.
Source: NREL

PLANNING CONSIDERATIONS FOR MUNICIPALITIES

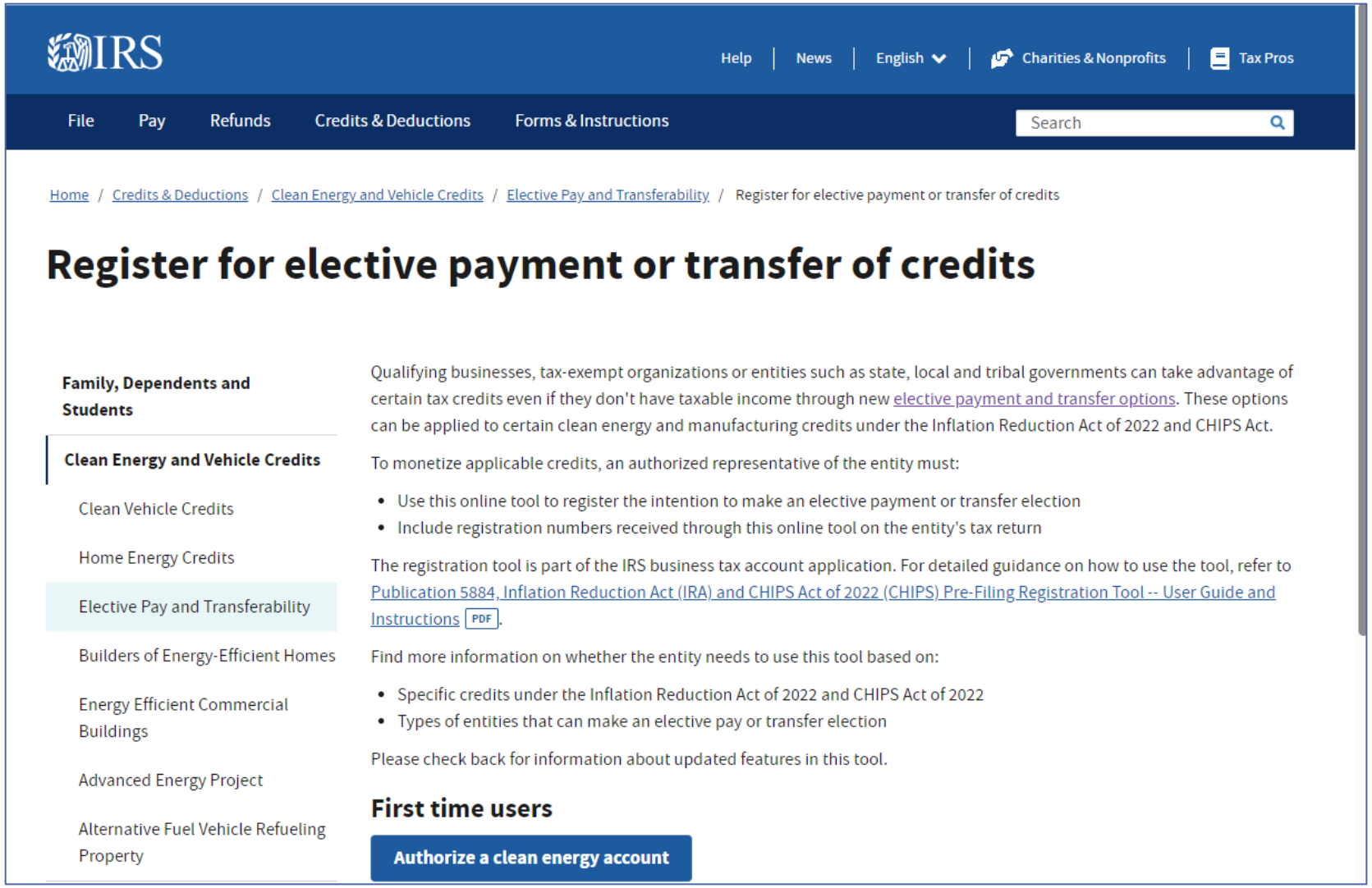
Webinar: Elective Pay and IRS Energy Credits Online

- For direct payment or transferring a clean energy credit for 2023, entities must complete a pre-filing registration process.

- Dept. of Treasury will host an Elective Pay webinar and provide an overview of the pre-filling registration process:

Tues, Jan. 9, 2024
2PM (eastern)

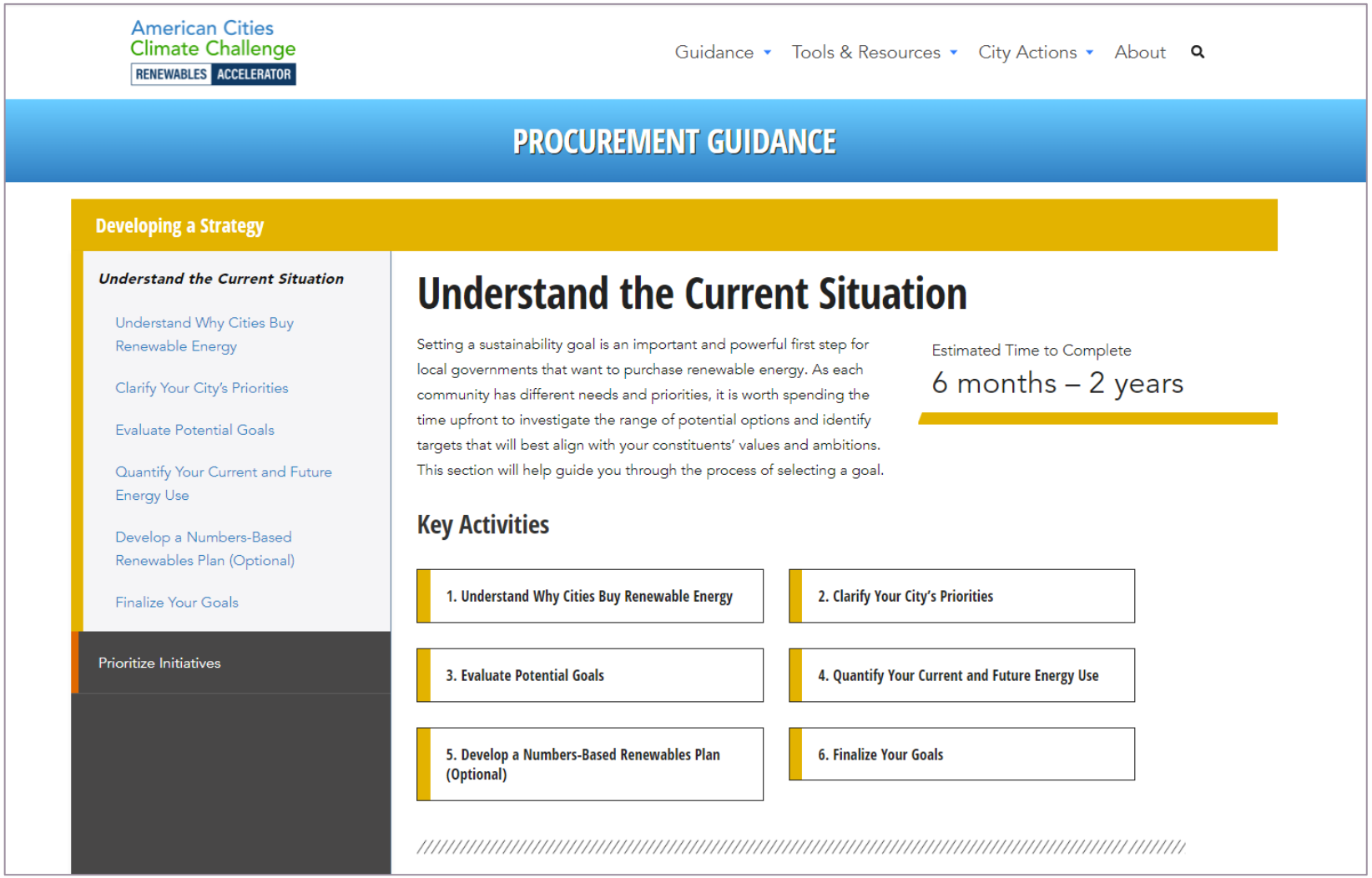
Webinar Registration



https://www.irs.gov/credits-deductions/register-for-elective-payment-or-transfer-of-credits

Conclusion

Assignment



Review the **American Cities Climate Challenge: Understand the Current Situation Key Activities** and begin discussing with colleagues what energy/GHG emissions goals (and other priorities) best align with your organization.

[Your Current Situation - American Cities Climate Challenge (cityrenewables.org)]

Questions?

We look forward to working with you!