



# ***Performance Contracting at NIH***

Oct 31, 2019



## *Introduction/Background*

- NIH has campuses in MD, NC, and MT
- 15 Million square feet of mixed use space
- Bethesda main campus - 322 Acre Campus
- Approximately 50 Buildings
- Central utility services with district heating and cooling
- Highly diverse building functions and types including:
  - Office
  - Multi-Discipline Laboratories
  - Animal Research and Holding
  - Hospital (Patient Care/Research) (over 4M sqft)
  - Industrial

# UESC & ESPC: What are they?

These are both contract vehicles created by the Federal Government, for the sole and explicit use by Federal Government Agencies.

They offer Federal agencies an effective means to implement



- ❖ **Energy Efficiency Projects,**
  - ❖ **Renewable Energy Projects,**
  - ❖ **Water Efficiency Projects,**
  - ❖ **Emissions Reduction Projects,**
- &**
- ❖ **Eliminate Up-front Capital Costs!!!**

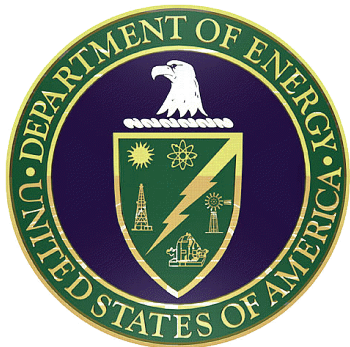


# UESC & ESPC: What are they?



## **UESC** - *Utility Energy Service Contract*

- Created by GSA
- Term can also refer to Utility Energy Service Companies
- These companies do work via the GSA Areawide Contract mechanism.



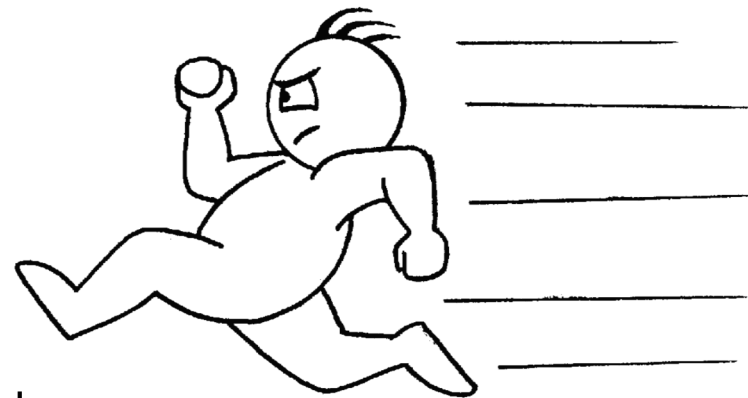
## **ESPC** - *Energy Savings Performance Contract.*

- Created by Department of Energy
- The term SuperESPC's is used to refer to companies that perform the contract work
- To be deemed a SuperESPC, the company must have successfully competed and won umbrella IDIQ contracts with DOE.

# *Benefits of UESC's and ESPC's*

## #1 – STREAMLINED PROCESS

- Acquisition Streamlining
- No synopsis
- No advertisement
- No large obligations tying up capital funds
- Procure without congressional appropriations
- No protests



# *Benefits of UESC's and ESPC's*

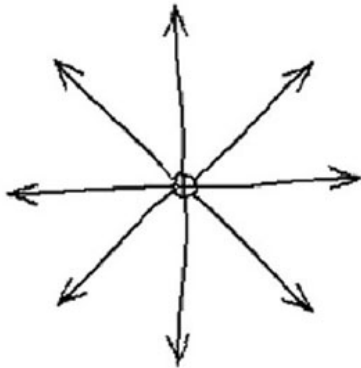
## #2 – COST SAVINGS



- OH&P is preset
- Open book process
- No payment of any kind on initial study
- No payment of any kind on further or subsequent engineering or construction efforts until the entire process is complete and accepted, regardless of construction term (typically 6 months to 2 years).
- Loan – One of the main options for these contracts is that they allow the use of loans to pay for the construction that typically is paid for with capital improvement dollars.

## *Benefits of UESC's and ESPC's*

### #3 – FLEXIBILITY



- Contracts and vendors are extremely flexible for adding scope in progress with simple modifications
- Ability to finance the work if needed in the absence of capital dollars
- Ability to react quickly to the continually increasing Federal Mandates for energy conservation, water conservation, and sustainability.



## *Benefits of UESC's and ESPC's*



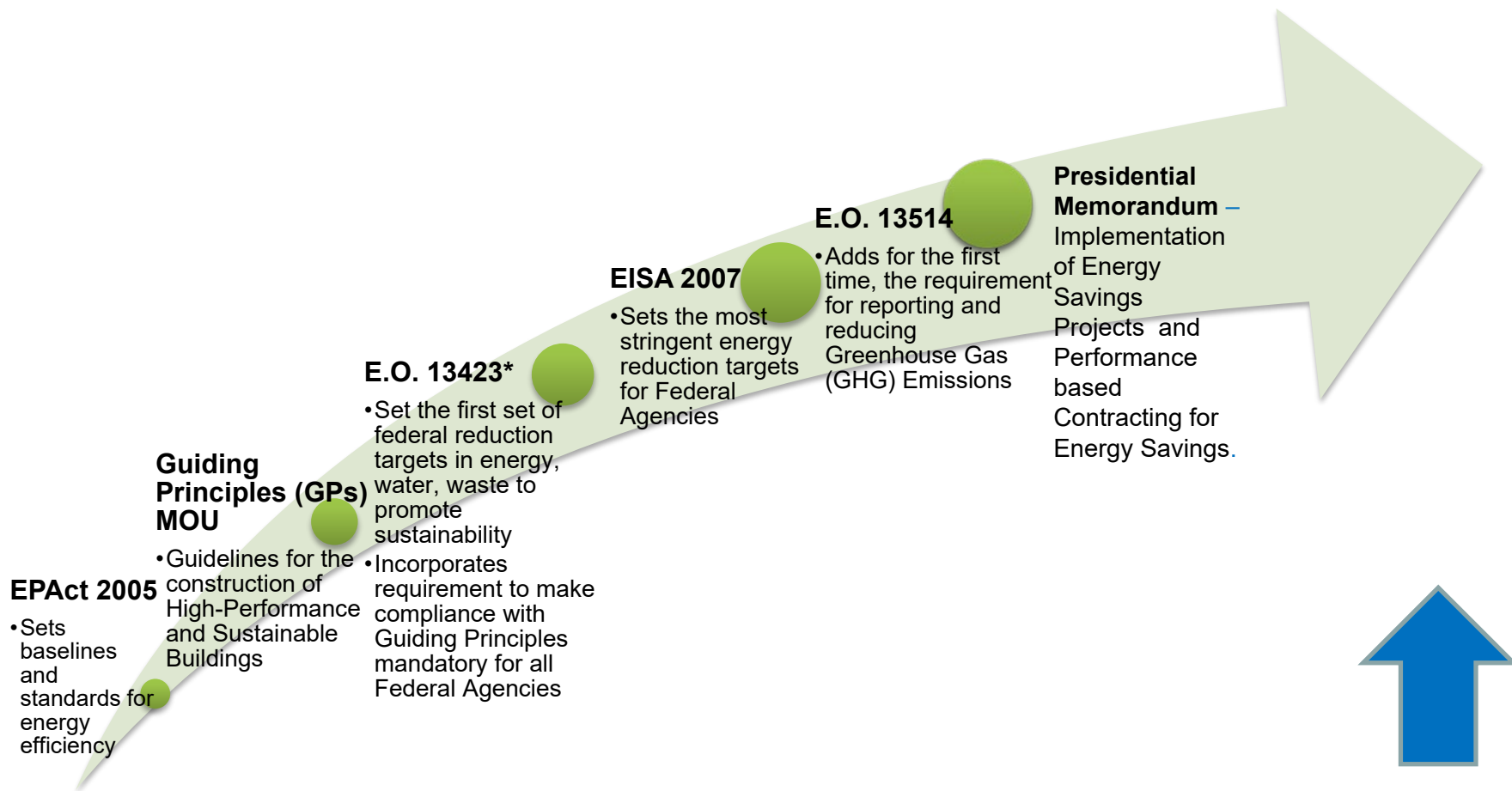
### #4 -Technical expertise

- Energy service companies pre-competed on technical merit and financial stability
- Since these entities perform all of these services and have vast experience through many contracts with many agencies, they are uniquely qualified to assess the actual costs from construction, and the subsequent accuracy of expected paybacks.
- Contracts offer by design a one-stop shop for feasibility/initial studies, design, and construction for consistency and accountability. Contracts also offer savings guarantees, measurement and verification, and operations and maintenance options to roll into a one-stop shop if the agency finds those desirable. There are some differences in the two contract vehicles with respect to guarantees.





# Historical Mandates Impacting NIH





## *Federal Mandates*

- EO 13693 (Sustainability), Superseded by 13834
- As America's biggest user (\$ 200 Billion annually), Federal Gov must lead the energy conservation effort and save taxpayer \$ and reduce emissions
- Specifically to NIH –
- Industrial and Lab facilities – had been mandated to reduce energy per sqft by 3% annually, or by 30% by 2015. Previously 2.5% annually through 2025 was mandated, now we supply our own reduction goals.



## *Laws & Executive Orders*

- Previously mandated to reduce water consumption per sqft by 2% annually, or by 16% by 2015. Now mandated to achieve 20% reduction based upon 2007 baseline. Agency will set annual goals beyond that.
- Report to the President, OMB, DOE, & HHS
- Goals, Implementation Plans, and Results are tracked
- No Facilities will be exempt



## *NIH Energy and Water Conservation Program*

- Seeks to comply with all of the federal mandates
- Seeks to decrease NIH utilities and operating costs
- Seeks to conserve natural resources
- Seeks to decrease air emissions (GHG)



## *Other reasons to conserve*

- NIH expenditures for utilities exceed \$91,000,000 in FY 2018
- Saving Energy and Water = \$ Savings
- Saving Energy and Water conserves natural resources



## *What is an Energy or Water Conservation Project?*

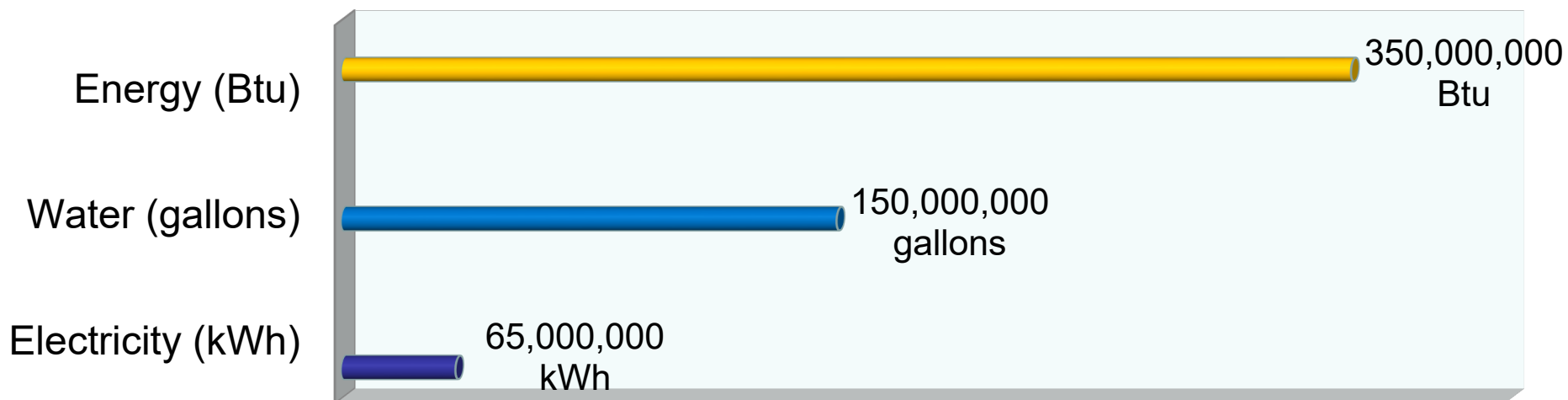
- Installation or implementation of a measure, or series of measures, designed to conserve Energy or Water.
- NIH has done simple singular measures, and single buildings as well as multiple measures, multiple buildings, multiple sites



## NIH Use of ESPC's and UESC's

Since 2001, NIH has performed nearly 25 energy and water conservation projects through these vehicles.

### NIH Cumulative Savings through FY18





## NIH Use of ESPC's

- Past projects have included energy or water conservation measures (ECM's) including, but not limited to:
  - CHP
    - gas turbine cogeneration
    - steam turbine cogeneration (tour if interested combined with CRC tour)
  - lighting and water fixtures & controls
  - condensate recovery systems,
  - steam traps,
  - heat exchangers, economizers, run-around loops
  - compressors and vacuum systems,
  - medical and research equipment retrofits,
    - lasers, stills, autoclaves, film processors, microscopes
  - RO systems,
  - solar (PV) systems,
  - metering,
  - utility data analysis software,
  - lighting and building controls,
  - Vfd's, high efficiency motors,
  - piping insulation,
  - chillers, cooling towers, and efficiency improvements



Condensate recovery system



Solar PV Panels





# BIO

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