


# Operational Energy Strategy Implementation

Update

Kevin Smith, Division Manager, Energy Programs
Office of Environmental and Energy Coordination

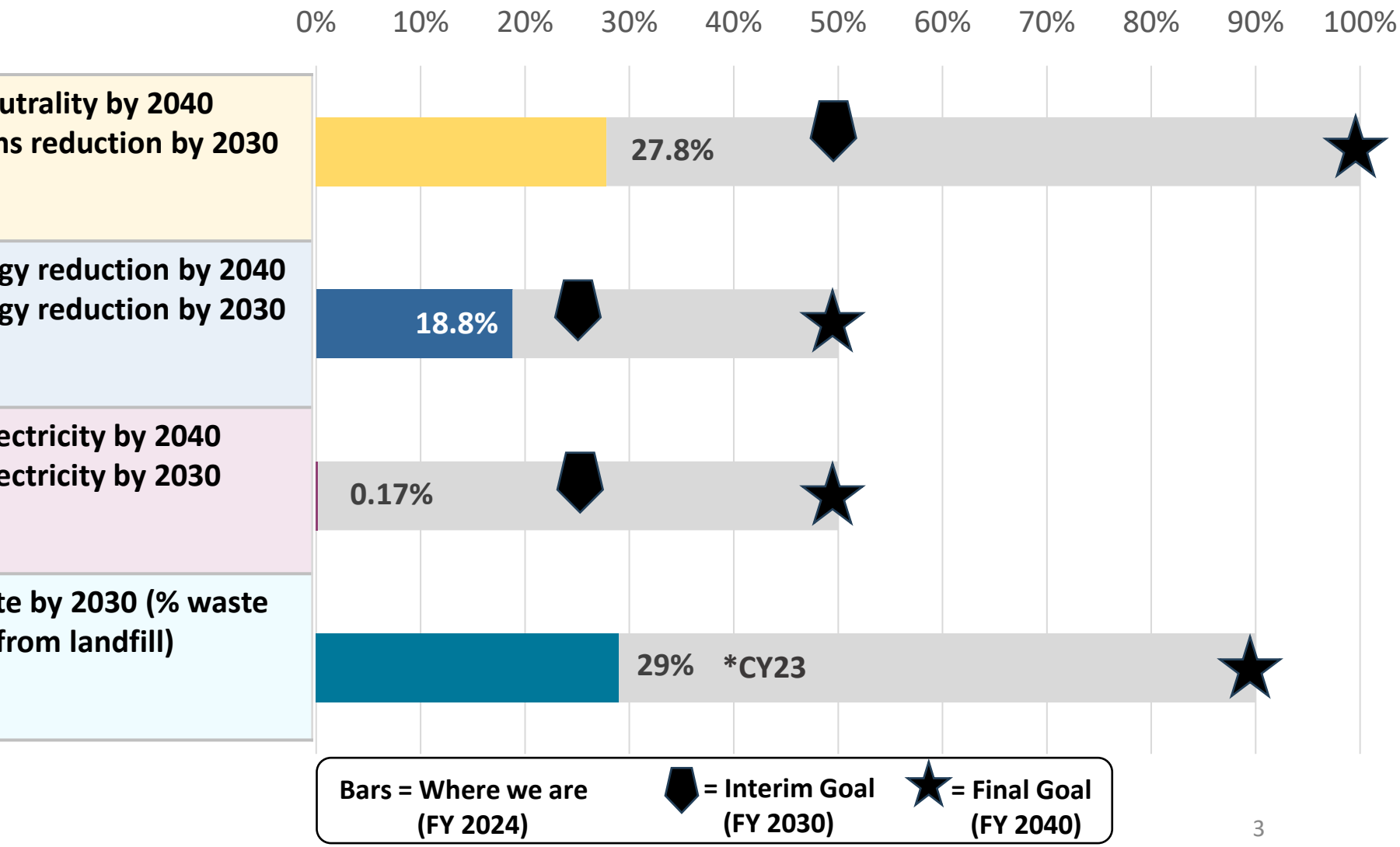
February 25, 2025

# Agenda

- Updated FY 2024 OES Progress and Highlights
- Progress and Next Steps: Building Energy Conservation
- Progress and Next Steps: Solar
- Operational Zero Waste Updates

# Progress toward OES Targets – FY 2024 Update

| | |
|---|---|
| Carbon Neutrality | • Energy Carbon Neutrality by 2040<br>• 50% GHG emissions reduction by 2030 |
| Energy Efficiency | • 50% building energy reduction by 2040<br>• 25% building energy reduction by 2030 |
| Renewables | • 50% renewable electricity by 2040<br>• 25% renewable electricity by 2030 |
| Waste | • Achieve Zero Waste by 2030 (% waste tonnage diverted from landfill) |



# 2024 Highlights – Facilities

- Energy retrofit + solar projects at Spring Hill Rec Center and Reston Community Center
- VA Energy Efficiency Council award – HCD Pender Building
- ASHRAE Technology award – Cub Run Rec Center
- **Achieved $8M in avoided costs**



Spring Hill Rec Center solar array

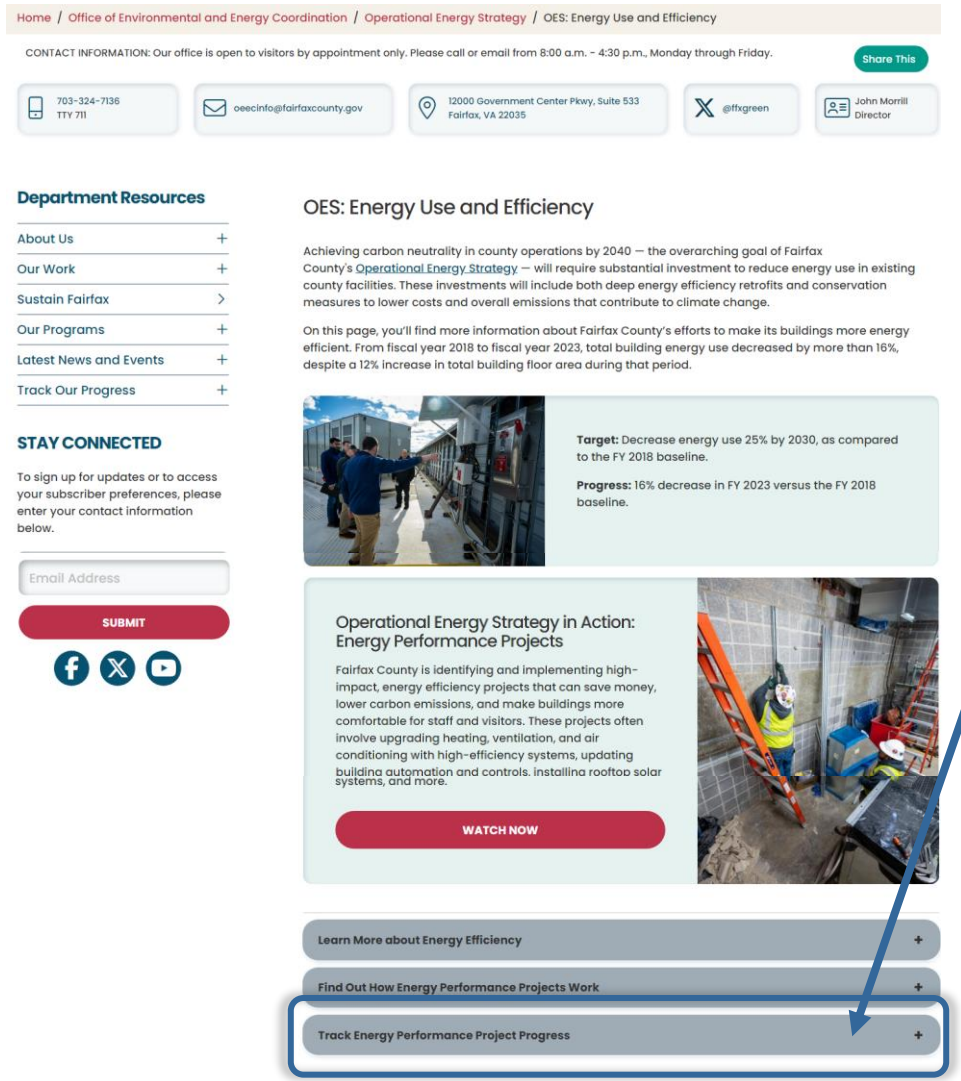
# Facility Retrofits Since 2021 OES Adoption

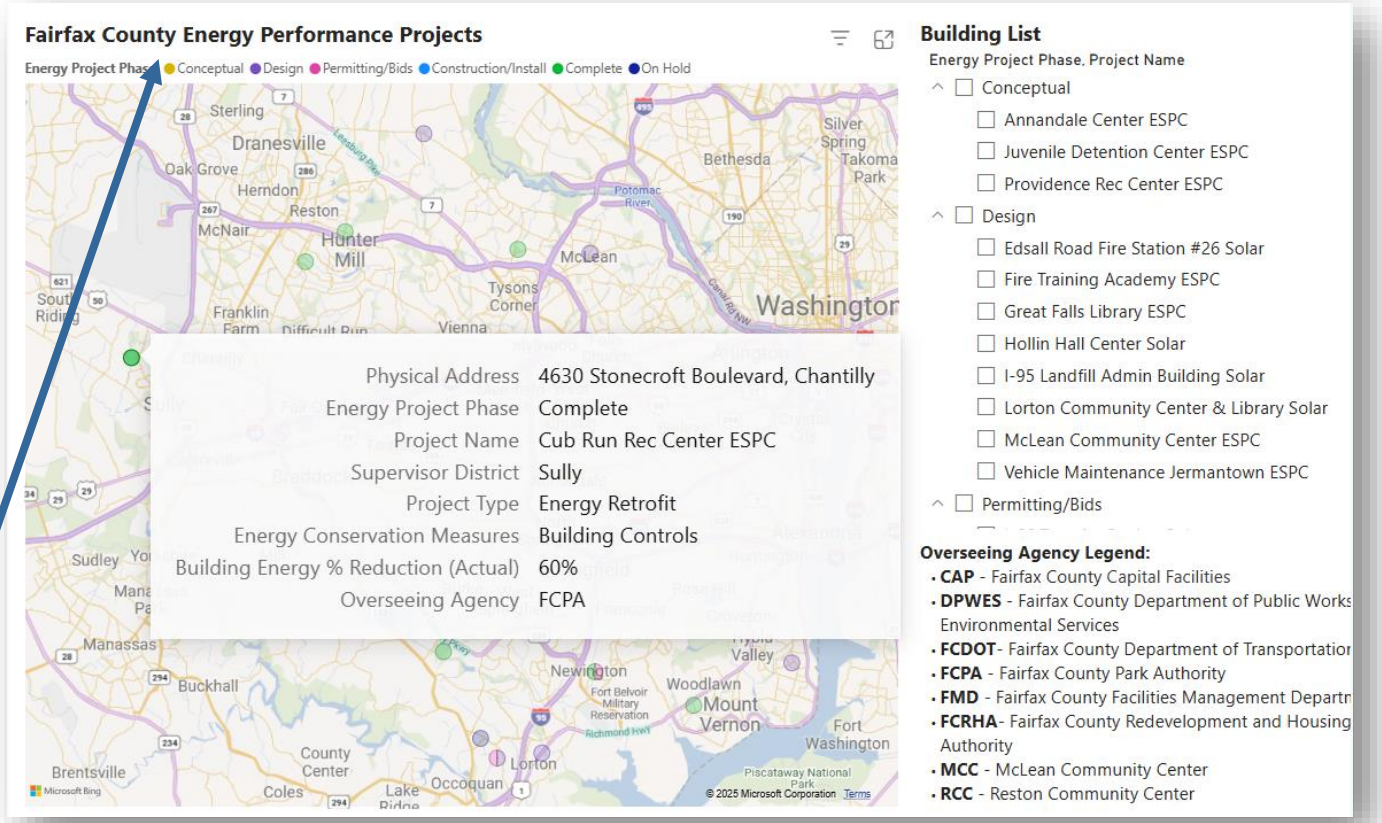
| Completed Retrofits (multiple upgrades unless noted) | | | | | |
|---|---|---|---|---|---|
| # | Site | % Savings | Dept | Complete | Status |
| 1 | DPMM Warehouse Ext Lights | 1% | FMD | Oct 2021 | 5 |
| 2 | Pennino – AHUs and Pumps | 16% | FMD | Apr 2022 | 5 |
| 3 | Fairfax City Library | 32% | FMD | Jun 2022 | 5 |
| 4 | Herrity – AHUs and Pumps | 13% | FMD | Oct 2022 | 5 |
| 5 | South Run Rec Center | 47% | FCPA | Nov 2022 | 5 |
| 6 | Cub Run Rec Center | 60% | FCPA | Nov 2022 | 5 |
| 7 | Juvenile Detention Lights | 12% | FMD | Jan 2023 | 5 |
| 8 | Pender Building | 14% | HCD | Dec 2023 | 5 |
| 9 | Reston Library Ext Lights | 1% | FMD | Jul 2024 | 5 |
| 10 | Spring Hill Rec Center | 16% | FCPA | Jul 2024 | 5 |
| 11 | Reston Community Center | 12% | RCC | Oct 2024 | 5 |

| In-Progress Retrofits (multiple upgrades unless noted) | | | | |
|---|---|---|---|---|
| # | Site | % Savings | Dept | Status |
| 1 | I-66 Transfer Station Lighting | 6% | DPWES | 4 |
| 2 | I-95 Landfill Admin Building Lighting | 2% | DPWES | 4 |
| 3 | Newington Admin Building Lighting | 6% | DPWES | 4 |
| 4 | Franconia Rec Center | 21% | FCPA | 4 |
| 5 | Oakmont Rec Center | 9% | FCPA | 4 |
| 6 | Minnie Peyton CC Lighting | 17% | FCPA | 3 |
| 7 | Great Falls Library | 30% | FMD | 2 |
| 8 | McLean Community Center | 14% | MCC | 2 |
| 9 | DVS Jermantown Phase 1 | 4% | DVS | 2 |
| 10 | Fire Training Academy | 5% | FMD | 2 |
| 11 | Providence Rec Center | 1% | FCPA | 1 |
| 12 | Annandale Center | 7% | FMD | 1 |

| 1: Concept | 2: Design | 3: Permit | 4: Construction | 5: Complete |
|---|---|---|---|---|

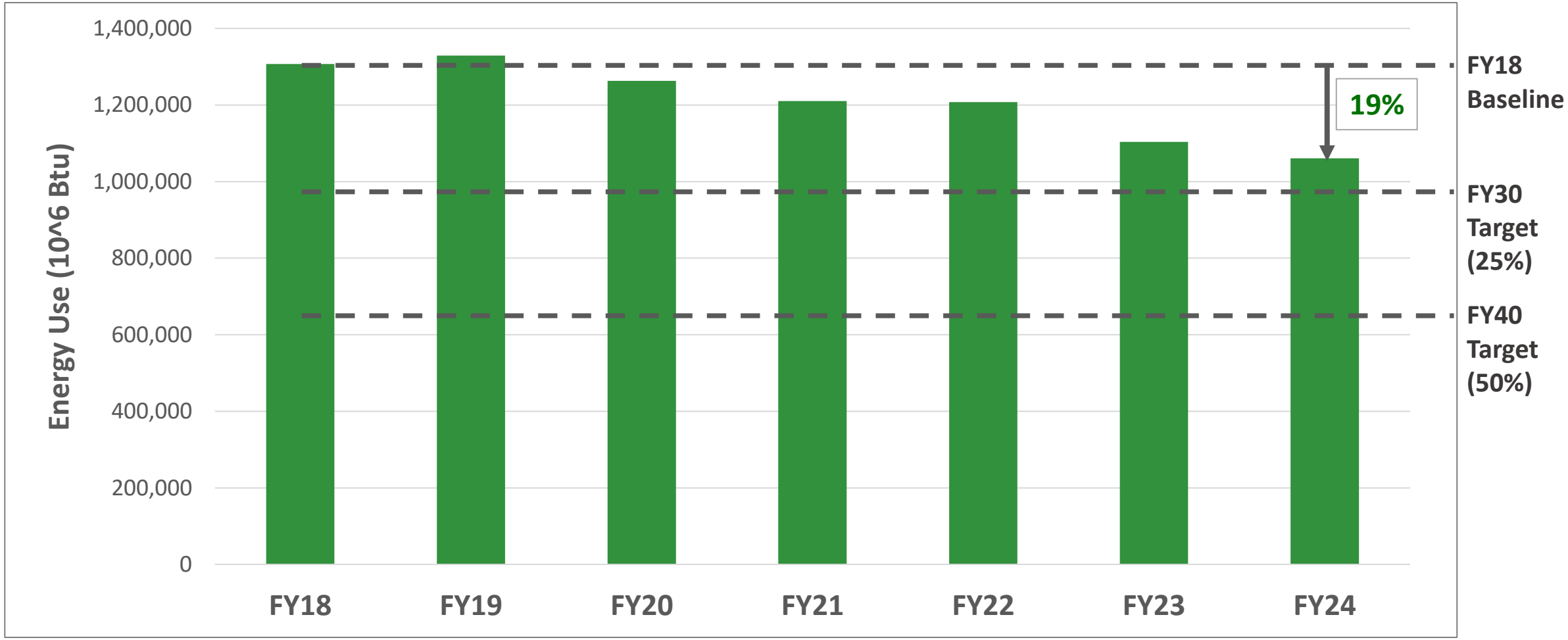
# Retrofit Progress – OES Webpages



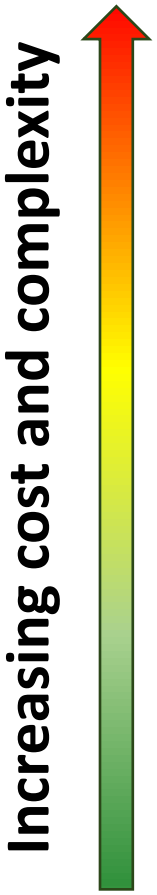




https://www.fairfaxcounty.gov/environment-energy-coordination/operational-energy-strategy/energy-use-efficiency

# Progress toward OES Targets – Facility Energy

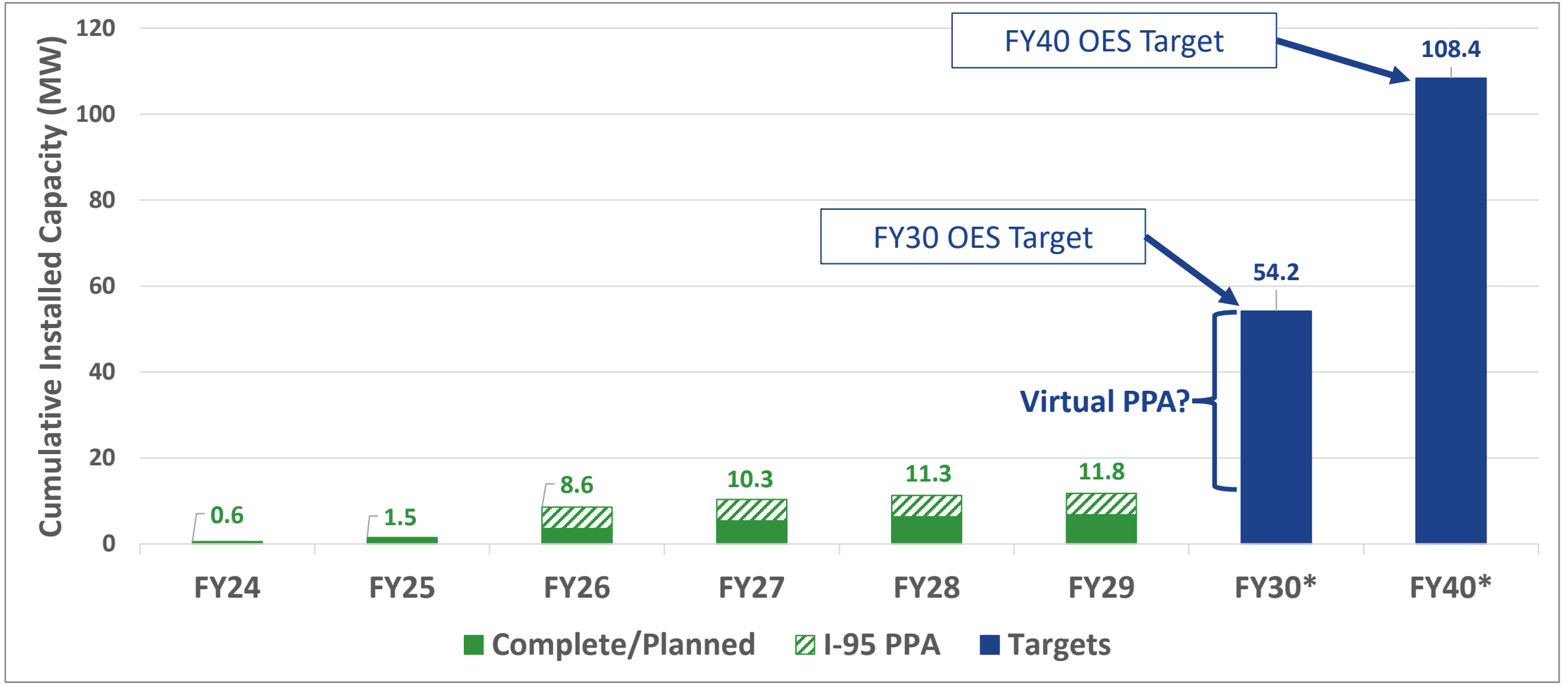


# Types of Energy Conservation Programs

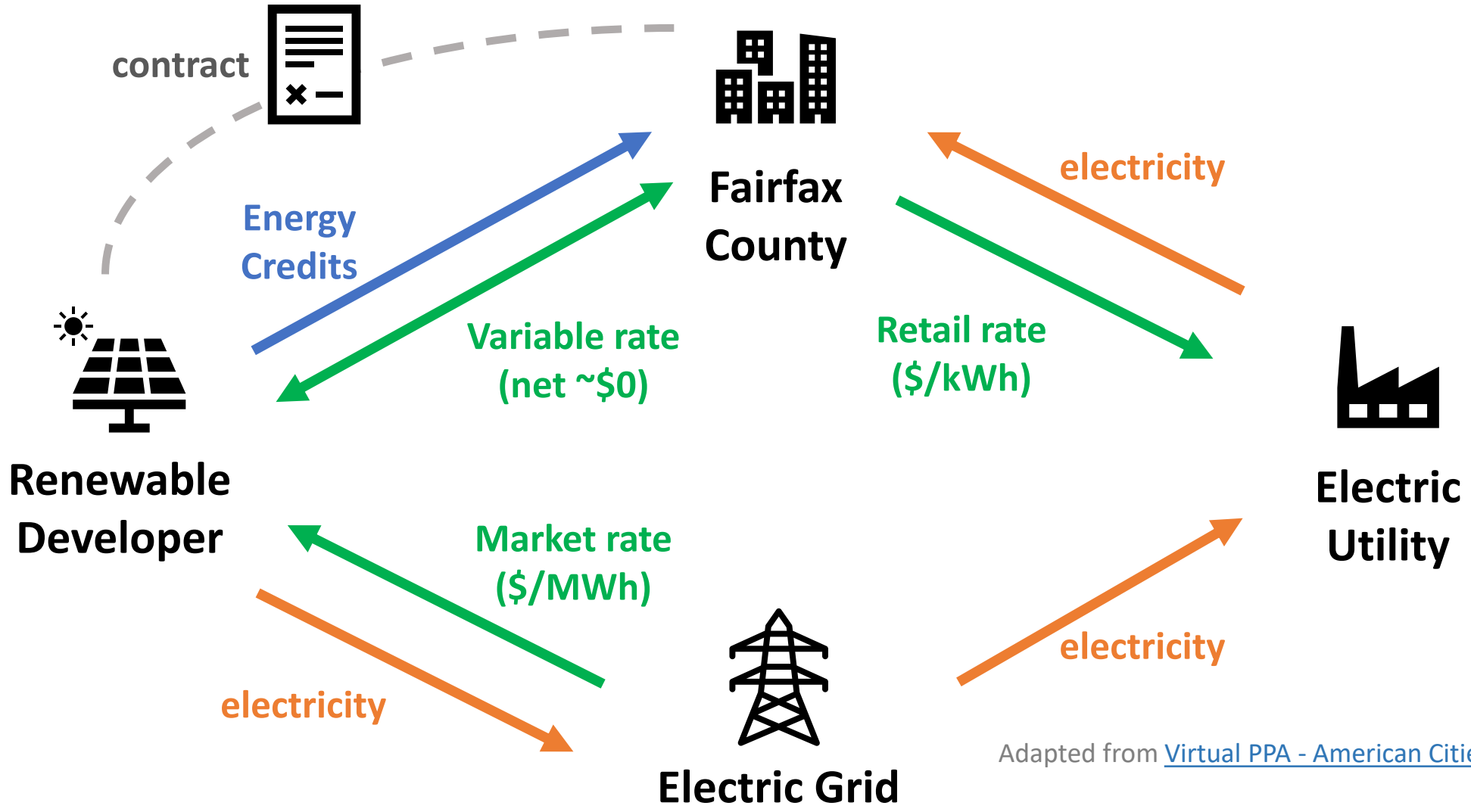



| | |
|---|---|
| Energy Retrofits | • Capital equipment replacement<br>• Frequency: every ~10-30 years |
| Re-Commissioning (ReCx) | • Reviewing and testing controls<br>• Frequency: every 3-5 years |
| Continuous Commissioning (CCx) | • Continuous performance monitoring<br>• Frequency: real-time, ongoing |

# Progress toward OES Targets – Solar



# Virtual Solar Power Purchase Agreements




Adapted from Virtual PPA - American Cities Climate Challenge

# Zero Waste and Sustainable Procurement




## Zero Waste

- ✓ Departments' 2nd Annual Action Plans in Progress
  - ✓ 82% of departments submitted 2024 Action Plans & Annual Reports.
- ⧗ Reusable foodware at 60+ special events including Earth Day 2024; pilot in progress for county rentable event venues




## Sustainable Procurement

- ✓ "Scope 3" Greenhouse Gas Analysis Completed
  - ✓ Scope 3 includes the emissions generated by the County's supply chain
  - ⧗ Currently exploring opportunities for emissions reduction
- ✓ 110 Major Suppliers Joined Corporate Social Responsibility Program



# Upcoming BOS Activity

| | |
|---|---|
| TBD (2025) BOS meeting | Apply/Accept Board Item for Charging and Fueling Infrastructure grant (EV Charging Stations for public) |
| May 2025 BOSEC | Climate Action Implementation Status Report<br>• Community-wide Energy and Climate Action Plan (CECAP)<br>• Resilient Fairfax<br>• Operational Zero Waste Update |