

CLIMATE ACTION PLAN IMPLEMENTATION

Challenges and Opportunities

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Common Implementation Challenges

- Tunnel vision of current GHG targets and planning
- Adaption and implementation integration
- Isolated methods of measurement
- Lack of governmental department coordination
- Absent project management and financial oversight
- Climate equity and community-driven policy
- Low leverage of high reduction measures
- Underutilized state and federal resources

Implementation Opportunity #1

"Failure-to-Launch"

- Planning cycle tunnel vision
- Multiple planning and goal updates pass without demonstrable greenhouse gas (GHG) reduction
- Inventories and reporting focus can misdirect resources
- **Recommendation**
 - Six recommended phases of climate action execution
 - *Discovery, planning, scoping, budgeting, procurement, and delivery**
 - Integrate decision support and planning skills
 - Project management and execution



Implementation Opportunity #2

Coordination and Project Management

- Resources, staffing, and priorities alignment
- Project management resources + planning
- Budgetary and staffing resources + policy tools integration

- **Recommendation**
 - “Whole of government” approach including cooperation between various departments and agencies
 - Foster formal collaboration across agencies through strategies such as:
 - Creating joint offices
 - Establishing lead agencies
 - Implementing overhead directives



Implementation Opportunity #3

Prioritize Heavy-Hitters

- Clean electric grid and low-carbon transportation prioritization
- Community-wide and transportation-specific clean energy goals
- Building and transportation electrification
 - *I.e. Heat pumps versus combustion furnace or boiler*
- **Recommendation**
 - Early focus on transportation **electrification**
 - Switching to lower-carbon fuels, improving vehicle efficiency, and improving system-wide efficiency
 - Implement utility or local **government incentive programs**
 - Adopt mandatory **policies to improve energy performance of existing buildings**



Implementation Opportunity #4

Climate Equity & Policy

- GHG emissions measurement alone can be limited
- Standalone climate plans can isolate climate
- Community members to co-design solutions

- **Recommendation**
 - Co-develop proposals with the community where possible
 - Use multi-level involvement of community groups
 - Prioritize energy equity and affordability
 - Interventions to lower energy burdens
 - Facilitate accessible financing
 - Data-driven community assessments
 - EPA's Environmental Justice Screening and Mapping Tool (EJSCREEN) resource



Implementation Opportunity #5

Utilize Funding & Resources

- Unprecedented federal investment
- Continuous state investment
- Opportunity for county and city

- **Recommendation**
 - Assess jurisdictions existing agency
 - Leverage existing resources
 - Database of [State Incentives for Renewables & Efficiency](#) (DSIRE)
 - Maryland Energy Administration (MEA): [State and Local Incentives](#)
 - Maryland Clean Energy Center (MCEC): [Finance Resources List](#)
 - Virginia DEQ: [Programs and Financial Incentives](#)
 - DC Department of Energy and Environment: [Grants and Funding](#)
 - MWCOG: [EV Grants and Funding Opportunities](#)
 - Federal Funding [Opportunities for Local Decarbonization](#)



Building an Implementation Plan

- Does initial climate, energy, or transportation plan include details for implementation?
- Coordinate cross-agency communication, project development timelines, and prioritization
- Implementation report should outline exact actions identified in its strategy
- **Recommendation**
 - Integrate actions identified in the adaptation strategy into day-to-day operations and decision-making processes
 - Operationalize key areas;
 - Service delivery, asset management, infrastructure projects and community planning

CASE STUDIES

Montgomery County, Maryland

Case-Study: Implementation Elements

Montgomery County Goals

- Reduce GHG emissions 80 percent by 2027
 - 100 percent by 2035
- *County community-wide GHG emissions decreased by 30 percent between 2005 and 2020*

Priority Action Items:

- Quarterly progress reports
- Annual reports and annual implementation plan
- Building Energy Transition Implementation Task Force
- Working to establish:
 - *Economic and financial export workgroup*
 - *Cross-Departmental Climate Innovation Lab*
- **\$1.4 billion recommended for projects that advance Climate Change goals in FY23-28 Capital Improvements Program**

Fairfax County, Virginia

Case-Study: Implementation Elements

Fairfax City Goals

- Reduce community GHG emissions 50 percent below 2005 levels by 2030
 - Achieve carbon neutrality by 2050

Priority Action Items:

- Community-Wide Energy and Climate Action Implementation Plan
- Fairfax Green Initiatives Implementation Matrix
- Resilient Fairfax: Climate Adaptation and Resilience Plan
- Operational Energy Strategy
- Climate Action Dashboard Progress
- **\$1.85 million approved to begin implementation to achieve zero waste by 2030 and carbon neutrality by 2040**
 - Includes Fairfax County government and school operations

San Diego, California

Case-Study: Implementation Elements

San Diego Goals:

- Community-wide goal to achieve net zero by 2035 (regional goal)
- County Climate Action Plan 2018; City Climate Action Plan 2022
- City Climate Action Implementation Plan Draft 2023

Priority Action Items:

- Annual CAP monitoring report and five-year CAP updates (county)
- “Regional Decarbonization Framework” (county)
- Quarterly Citywide Sustainability Roundtable meetings (city)
- Draft Implementation Matrix (city)
 - Cross-collaboration
 - Climate Equity focus
- **\$1.5 million in the Sustainability and Mobility Department per city FY 2023 Adopted Budget**

San Diego, California

Draft Implementation Matrix

Strategy	Implementation Action Type	Number	Description	Responsible/Lead Department	Collaborating Departments	Implementation Pathways
STRATEGY 1 - Decarbonization of the Built Environment	Measure	BE-1.3	Decarbonize City Facilities			
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Action]; Foundational	BE-1.3a	Develop and adopt a municipal energy implementation plan and municipal zero carbon emissions buildings and operations policies	Sustainability & Mobility	Engineering and Capital Projects, General Services, DREAM	Adopt MEIP and ZEMBOP
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Supporting action]; *BE-1.3a	BE-1.3SA-1	Implement energy efficiency projects at City facilities to meet zero emissions goals for municipal buildings established in the Municipal Energy Strategy & Implementation Plan, prioritizing projects within the City's Communities of Concern	Sustainability & Mobility	Engineering and Capital Projects, General Services, DREAM, Public Utilities	Implement Municipal Energy Implementation Plan. Develop and implement AMD fossil fuel elimination plans. Establish partnerships with ESCOs and execute PPAs and EMSAs.
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Supporting action]; >BE-1.3SA-1	BE-1.3SA-2	Identify and prioritize energy projects at City facilities that increase resiliency for the surrounding communities and City operations, focusing on our Communities of Concern	Sustainability & Mobility	Engineering and Capital Projects, General Services, DREAM, Public Utilities	Implement Municipal Energy Implementation Plan. Gather lessons learned from microgrid pilot. Establish Resilience Hubs
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Supporting action]; *BE-1.3a	BE-1.3SA-3	Implement technologies such as renewable electricity generation, heat pumps, energy storage, and microgrids at City facilities to meet the zero emissions goals for municipal buildings established in the Municipal Energy Strategy & Implementation Plan.	Sustainability & Mobility	Engineering and Capital Projects, General Services, DREAM, Public Utilities	Implement Municipal Energy Implementation Plan. Develop and implement AMD fossil fuel elimination plans. Establish partnerships with ESCOs and execute PPAs and EMSAs.
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Supporting action] =BE-1.3SA-5	BE-1.3SA-4	Convert all street lights to LEDs and explore auto-dimming technology where public safety would not be compromised	Transportation	Engineering and Capital Projects	Budget for conversions
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Supporting action] =BE-1.3SA-4	BE-1.3SA-5	Convert all traffic signals to LED lights	Transportation	Engineering and Capital Projects	Update Street Design Manual
STRATEGY 1 - Decarbonization of the Built Environment	[Orig - Supporting action]	BE-1.3SA-6	Future development on City-owned property will require and reward proposals based on decarbonization and other CAP goals	DREAM	Sustainability & Mobility	Implement ZEMBOP

Note: Each strategy breaks down its included actions – designating both the lead operating department and collaborating departments.

Implementation Item Type	Status	Performance Metrics	Partners	Reduce GHG Emissions	Community Identified Action	Air Quality (0-10)	Public Health (0-10)	Jobs & Economy (0-10)	Resiliency (0-10)	Feasibility Score (1-10)	Equity Score (1-10)
Plan Implementation	Under Way; Est. adoption October 2022	Complete Y/N	NBI	Medium	Y	YES	YES	NO	YES	9.1	5.5
Plan Implementation	Under Way; FFEP Est. Jan 2024; ESCO projects Est. Jan 2025	% of muni facilities meeting zero emissions goal # of projects in CoCs	ESCOs & As-Needed Consultants	Medium	Y	NO	NO	YES	YES	8.2	5.5

Source: Draft Implementation Matrix. Accessed February 13, 2023.



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ADDITIONAL INFORMATION

Local Budgets and Capital Improvement Plans

- [Montgomery County](#): \$1.4 billion recommended for projects that advance Climate Change goals in FY23-28 Capital Improvements Program
- [Arlington County](#): \$649 million recommended in energy and environmental investments in FY23–32 Capital Improvement Program
- [City of Frederick](#): \$917,423 investment in Sustainability Initiatives Project in FY23-28 Capital Improvement Program
- [Fairfax County](#): \$1.85 million approved to begin implementation to achieve carbon neutrality by 2040 in adopted FY23-27 Capital Improvement Program

Arlington County, Virginia

Arlington County Goals

- County-wide carbon neutral by 2050
- County Government operations to achieve 100% renewable electricity by 2025

Priority Action Items:

- Community Energy Plan (CEP) Five-Year updates
 - Prepare for CEP 2024 update
- CEP Implementation Roadmap
 - Led by Arlington Initiative to Rethink Energy team (AIRE)
 - Annual CEP implementation report to County Board
 - Implementation Timeline for Strategies
 - 1-2 years, 3-5 years, 6-10 years, and 10+ years
 - Implementer Worksheet Template
 - **\$649 million recommended in energy and environmental investments in FY23–32 Capital Improvement Program**



Chicago, Illinois

Implementation Elements

Chicago Goals:

- Reduce the city's carbon emissions 62 percent by 2040
- 100 percent transition to renewable energy for all buildings
- Paris Climate Agreement commitments (59 percent accomplished)

Priority Action Items:

- Green Ribbon Committee (Annual Report)
- Green Steering Committee
- Green Urban Design Plan
- Equitable Urban Tree Canopy Development
- Building Decarbonization Policy Work Group and Report
 - 2022 Chicago Energy Transformation Code
- **\$101 million in community climate investments included in the "Chicago Recovery Plan"**