

**Technical Support for Integrated
Community Energy Solutions**

**Task 1: Integrating Energy into
Local Regulations and Programs**

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with support from



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Contents

Executive Summary	1
Introduction	4
Background	4
Definitions	4
District Energy (DE).....	4
Combined heat and power (CHP)	4
Microgrids.....	4
Integrated Community Energy Solutions (ICES)	4
Community Energy Systems (CES).....	5
Focus of This Report.....	5
Organization of This Report	5
Energy and Environmental Policy Context	6
International Policies.....	6
European Union (EU)	7
Denmark	8
Germany	9
South Korea	9
Canada	9
National Policy.....	9
British Columbia (BC)	10
Ontario	10
U.S. Energy Policy	11
Overview.....	11
Tax Incentives	11
CHP Investment Tax Credit	11
Renewable Production Tax Credit.....	11
Finance or Incentive programs	11
Tax-Exempt Financing	11
Energy Sustainability and Efficiency Grants and Loans.....	12
Waste Energy Recovery Incentives	12
Federal Energy Regulatory Commission (FERC).....	12
Portfolio Standards.....	13
Proposed Federal Laws Addressing District Energy.....	13
Thermal Renewable Energy and Efficiency Act of 2010 (TREEA).....	13
U.S. Environmental Policy	14
Air Quality	14
Boiler MACT	14
Cross-State Air Pollution Rule	15

Climate Change.....	15
Local Policy Examples Outside the COG Region	16
St. Paul.....	16
Toronto.....	18
Seattle	18
Portland.....	19
Vancouver	20
North Vancouver	22
COG Region Policies, Plans, Regulations and Programs	23
Energy Policy Frameworks	23
State Policy	23
District of Columbia.....	23
Maryland	23
Virginia	23
Summary of Major Policies	24
Local Jurisdictions.....	27
Arlington County	27
Loudoun County	29
Frederick County	29
Other	29
Summary of Policies and Programs.....	30
Planning.....	32
Federal	32
District of Columbia	34
Land Use Planning Overview.....	34
Community Energy Planning	34
Eco-District Planning	35
Maryland.....	35
Land Use Planning Overview.....	35
Community Energy Systems in Community or Comprehensive Master Plans	36
Eco-District Planning	37
Virginia	37
Land Use Planning Overview.....	37
Community Energy Planning.....	38
Eco-District Planning	39
Establishing Community Energy Systems.....	39
District of Columbia	39
Franchising and Facility Siting	39
Net Metering.....	39
Interconnection.....	39
Financial Assistance and Tax Incentives.....	40

Government Procurement Policies 40

Maryland..... 41

 Franchising and Siting 41

 Net Metering..... 41

 Interconnection..... 42

 Financial Assistance..... 42

 Tax Incentives..... 43

 Government Procurement..... 44

Virginia 46

 Franchising 46

 Energy Facility Siting 46

 Municipal Utilities 47

 Net Metering..... 47

 Interconnection..... 47

 Financing Assistance 48

 Tax Incentives..... 49

 Government Procurement 50

Building Compatibility 50

 District of Columbia 50

 Maryland..... 51

 Virginia 52

Best Practice Recommendations 54

 CES Challenges 54

 Awareness, Information & Education..... 54

 Leadership 54

 Price Signals 54

 Capital Costs 54

 Land Use 55

 Lack of Integrated Planning 55

 Siting 55

 Grid Access..... 55

 Energy Policy Framework..... 56

 Community Energy Planning..... 56

 Establishing Community Energy Systems..... 56

 Utility Franchising 56

 Energy Facility Siting and Permitting 57

 Financing Assistance 57

 Tax Incentives 57

 Government Procurement Policies 57

 Building Compatibility 57

 Zoning 57

 Community Energy Compatibility Standards..... 57

Review of Building Plans..... 58
Energy Performance Labeling..... 58

Executive Summary

The Metropolitan Washington Council of Governments (COG) recently launched a new initiative in the region to advance district energy utilities, combined heat & power (CHP), and microgrids. Deployment of these technologies, which we refer to collectively as Community Energy Systems (CES) has the potential to: cut emissions of criteria pollutants and greenhouse gases (GHG); reduce peak power demand; enhance energy security; reduce energy cost volatility; and strengthen the local economy by spending more energy dollars locally.

Local governments have a range of potential opportunities to facilitate implementation of CES through zoning, regulations, ordinances, policies and programs. This report describes current policies and regulations in the COG region, summarizes examples of policies elsewhere, and recommends best practice strategies for consideration by COG jurisdictions.

The report describes fundamental characteristics of CES and the resulting challenges faced in implementing these systems, including those relating to:

- Awareness, Information & Education
- Leadership
- Price Signals
- Capital Costs
- Land Use
- Lack of Integrated Planning
- Siting
- Grid Access

Internationally, CES activity is greatest in countries and provinces which have established strong energy efficiency and GHG reduction goals, with taxation, financing assistance, portfolio standards and other policies and programs that provide price signals that encourage CES implementation. Given the overall political and legal framework in the US generally and the MWCOG region specifically, MWCOG region jurisdictions cannot rely on this type of broader policy support. However, there is much that local jurisdictions can do, such as the following recommended best practices:

1. Set specific **goals** for energy efficiency and GHG emission reductions. These types of strong local government commitments provide an important context and driver for implementation of CES.
2. Conduct an **Opportunity Assessment** to identify high-priority nodes for potential CES by mapping:
 - a. Areas with high existing or future thermal loads;
 - b. Potential energy sources (such as power plants, sewer lines, industrial facilities, surface water bodies, etc.);
 - c. Location of major gas and power energy infrastructure; and

- d. Scheduled infrastructure capital improvement projects (e.g. road improvements, sewer and stormwater).
3. Convene key **stakeholders** to review the results of the Opportunity Assessment and identify and evaluate stakeholder interests and benefits.
4. Work with major stakeholders to fund, ideally with both public and private sources, **Integrated Energy Master Plans** (IEMPs) for the most promising nodes. An IEMP must address not only technical and economic issues but also critical questions regarding the appropriate model for development, financing, ownership and operation.
5. Identify an individual within the local government who has the interest, ability and authority to act as a **champion** for implementation; also identify champions within major non-government stakeholder entities.
6. Develop a model **franchise agreement** so that potential developers of a CES understand the terms, conditions and costs of obtaining a thermal energy service franchise. Franchises need not grant exclusivity to a district energy provider; however, practical limitations like space beneath the right of way and economic feasibility will likely prevent competition between multiple district energy system developers in a single area.
7. Consider providing **franchise fee repayment deferrals** until a CES reaches an established threshold of financial stability, and/or a franchise fee discount tied to, e.g., GHG emissions benefits.
8. Establish a Community Energy Working Group within your jurisdiction to **coordinate and streamline policies**, activities and decision-making in all departments having an impact on CES development.
9. Create **clear permitting guidelines** — such as a streamlined Conditional Use Permitting process — to support expedited site selection for CES plants and distribution system routing.
10. As an outgrowth of the process started with the IEMP (Recommendation #4), identify and evaluate your government's **preferred role in ownership and financing** of CES, including providing or facilitating low-cost sources of financing such as tax exempt bonding or tax increment financing.
11. Consider providing temporary **property tax relief** to property owners that connect their buildings to district energy.
12. **Lead by example** by committing to connecting all local government buildings to the CES as soon as it is practical and cost-effective to do so.

13. Evaluate and **modify zoning** to encourage smart growth density and to allow for construction of CES plant facilities near to the center(s) of development density.
14. Award **density bonuses** to property developers that exceed minimum green performance requirements and make connection to district energy one of the ways to achieve this.
15. Develop recommended or mandatory **CES compatibility standards** for building HVAC design, addressing criteria for: hydronic distribution within the building; criteria for hot water and chilled water supply and return temperatures; allocation of small amount of basement space for future interconnection with a district energy system; and minimum criteria for the building automation system.
16. Require **district energy feasibility studies** for large buildings and master plans to analyze the energy, economic and environmental costs and benefits of district energy service compared with conventional approaches.
17. Ensure that any **Energy Performance Labeling** system applied in the jurisdiction recognizes the efficiency benefits of a district energy system serving the building.