

# **Technical Support for Integrated Community Energy Solutions**

## ***Outline and Approach Overview***

### ***Report #1***

***Revised June 13, 2011***

**Submitted to**



**Metropolitan Washington  
Council of Governments**

**Submitted by**



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## Focus of the Project

The Metropolitan Washington Council of Governments (COG) recently launched a new initiative in the region to advance clean energy technology - microgrids, combined heat & power (CHP), and district energy utilities. COG members desire planning assistance to identify suitable sites for development of new clean energy technology in the region. Deployment of these technologies in the region has the potential to:

- cut emissions of both criteria pollutants and greenhouse gases;
- 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 clean energy technologies through zoning, regulations, ordinances, policies and programs. An important focus of this project is to identify, evaluate and recommend strategies for facilitating clean energy technologies.

In addition, this project will provide information, including case study examples, on the costs and benefits of integrated community energy systems, including district energy, microgrids and CHP. This assessment will examine the business case for both new and retrofit systems, as well as power grid benefits, and environmental benefits including greenhouse gases and regulated pollutants.

## Limitations of the Project

Sustainable energy is an enormous topic, covering many end-uses, technologies, levels of government and policy issues. This project cannot address every strand of this complex web. This is a relatively small project on a tight timeline. Therefore, the effort must stay focused on the “clean energy technologies” identified in the RFP and in our proposal: district energy, CHP and microgrids. Technologies such as electric vehicles, non-CHP renewable power generation (wind, photovoltaic, etc.) are not part of the scope of this project. However, to the extent that our investigation of policies results in information relevant to these technologies, this information will be incorporated into the report. In addition, where appropriate, we will note the potential interface or relevance of these technologies to the identified clean energy technologies on which this report is focused. In addition, our report will identify areas where additional study may be appropriate.

## Purpose of this Report

This initial Report #1, with associated Reports #2 and #3, fulfills our commitment for “Outline and Approach” to: the second subtask in Task 1 (National and International Policy Framework); and Task 2. Further, we have expanded Report #1 to include our Outline and Approach to all of Task 1. Our general approach to the work was described in our proposal. The attached initial Reports #2 and #3 provide detailed draft formats and outlines of the envisioned final products for Tasks 1 and 2, respectively.

# Schedule

**Project Schedule**  
**FVB Energy Inc.**  
 Revised June 13, 2011

Subtask activity duration   
 Subtask activity   
 Report   
 MWCOG feedback   
 Presentation 

Weeks starting May 16 -->	May		June					July				August				Sept	Oct?	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	?
<b>Task 1. Integrating Energy Into Local Regulations and Programs</b>																		
<b>1. Existing Local Policies</b>																		
1.1. Search and Extract																		
1.2. Verification																		
1.3. Distillation																		
Subtask 1 Draft Report																		
MWCOG feedback																		
Subtask 1 Final Report																		
<b>2. National and International Policy Framework</b>																		
2.1. USA																		
2.2. International																		
Subtask 2 Outline and Approach																		
Subtask 2 Draft Report																		
MWCOG feedback																		
Subtask 2 Final Report																		
<b>3. Permitting</b>																		
<b>4. Development Requirements</b>																		
<b>5. Zoning and Building Codes</b>																		
<b>6. Siting</b>																		
<b>7.a. Draft Report</b>																		
Presentation (concurrent with Task 2)																		
MWCOG feedback																		
<b>7.b. Final Report</b>																		
<b>Task 2. Cost Benefit Information and Business Case</b>																		
<b>Task 2 Outline and Approach</b>																		
<b>1. Overview of Technologies</b>																		
<b>2. Costs and Benefits</b>																		
<b>3. Implementation Challenges</b>																		
<b>4. Ownership and Operation Models</b>																		
<b>5.a. Draft Report</b>																		
Presentation (concurrent with Task 1)																		
MWCOG feedback																		
<b>5.b. Final Report</b>																		
Presentation (concurrent with Task 1)																		
<b>Additional Presentation</b>																		