Rochester Energy Master Plan

Community Stakeholder Meeting
February 27, 2014

GOALS OF FIVE CITIES ENERGY MASTER PLANS

- Reduce energy consumption
- Strengthen reliability of cities' energy infrastructure
- Create jobs in clean energy industries
- Contribute to a cleaner environment
IT'S NOT JUST A PLAN...

IT'S A PROCESS!

Milestone 1: Conduct Assessment
Milestone 2: Establish Goals
Milestone 3: Develop Plan
Milestone 4: Implement Policies and Measures
Milestone 5: Evaluate Progress & Report Results

Engage Stakeholders

Five Cities Energy Master Planning Process

KEY PLAN COMPONENTS

Energy Master Plan

- Clear goals and targets
- Detailed initiatives to achieve goals
- Strategies for on-going implementation and planning
ROLES & RESPONSIBILITIES

Cities’ role
- Designate staff to participate in the planning process
- Set goals and targets; evaluate solutions
- Take ownership of the plans and the implementation
- Track and report on progress
- Update plans, as needed
- Build relationships with the other cities

NYPAs on-going role
- Facilitate information sharing and collaboration across the cities
- Pursue strategic initiatives that cut across all five cities
- Finance energy efficiency upgrades and clean energy solutions, where applicable

BASIC INFORMATION

- Audience: General public
- Plan voice: From the cities
- Implementers: The cities
- Design: NYPAs template for consistency and branding
  - Fonts and colors
  - Icons
  - Template for plan pages
  - Various template graphics
PLAN OUTLINE

I. Letter from President of NYPA
II. Overview: Five Cities Energy Master Plans (& Cities)
III. Letter from the Mayor
IV. Introduction to City Energy Master Plan
V. Executive Summary
VI. Energy Planning & Coordination
VII. Energy Distribution and Supply
VIII. Energy Efficiency in Buildings
IX. Transportation
X. Moving Forward
XI. Five Cities Conclusion

For each Action Area:
- Goal(s)
- Existing conditions, challenges, and programs
- Initiatives to achieve goals
- Implementation matrix

TIMELINE OVERVIEW

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<td>Executive</td>
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<td>Planning</td>
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<td>Buildings &amp; Facilities</td>
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<td>Plan Outline</td>
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STAKEHOLDER ENGAGEMENT

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<td>Data collection</td>
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**Stakeholder Advisory Board:**
- Provide advice and ideas on potential content for the plan
- Help develop the goals
- Act as a critical sounding board for initiatives being considered for the plan
- Provide support in analyzing various strategies for achieving the goals
- Help get the word out on the plan and its goals to the greater community
- Support its ongoing implementation, tracking, reporting, and updating

**BuildSmartNY**

**Five Cities Energy Master Plans**
- Albany
- Buffalo
- Rochester
- Syracuse
- New York

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CONSULTING TEAM - ROCHESTER ENERGY MASTER PLAN
LABELLA ASSOCIATES

**Barbara Johnston, AICP | Project Manager**
- Guide and coordinate the work of all team members and be the primary contact with NYPD and its representatives.
- Integrate technical reports into a final plan document.
- Energy procurement

**Rick McClung, PE, CPD, LEED AP | Engineering Lead**
- Building Efficiency analysis
- Manage building audits
- Develop Building Implementation Strategies.
HR&A

Stockton Williams | Energy Efficiency Specialist
- Building management and behavior modification
- Green codes
- Transit and smart growth policies

CLEAN FUELS CONSULTING

Rhea Courtney Basic | Senior Fleet Energy Specialist
- Analysis and recommendations relating to fleets and vehicular fuels.
- Evaluate alternative fuel vehicles

TAITEM ENGINEERS

Susan Galloway | Senior Energy Analyst
- Energy delivery infrastructure
- Energy generation and sitting

LARSEN ENGINEERS

- Building Audits
PLAN CONTENTS

- **Energy Planning and Coordination**
  - Energy procurement procedures and policies
  - Future energy requirements
  - Potential for coordination among government entities

- **Energy Delivery Infrastructure**
  - Electricity and gas delivery infrastructure
  - District heating
  - Renewable vehicular fuels
  - Energy generation
    - Renewable energy, combined heat & power
    - Siting, regulations, financial incentives

Plan Contents (cont’d)

- **Transportation Energy Efficiency**
  - Analysis of vehicle fleets
  - Renewable fuel vehicles
  - Transit, pedestrian and bicycle transportation
  - Street lights
  - Traffic signals – energy efficiency and traffic controls

- **Energy Efficiency in Buildings**
  - Land Use and Building Code Regulations “Audit”
  - Analyze energy usage of City facilities
  - Portfolio Manager performance ratings
  - ASHRAE Level 1 Audits of selected buildings
  - Recommend physical and management strategies
Plan Recommendations

- 1-3 high-level goals per Action area
- Summary of existing conditions and programs
- Key initiatives
- Implementation matrix
  - Responsible entities, key partners
  - Estimated cost
  - Sources of funding
  - Short-, medium- and long-term milestones

Other State Initiatives

- Build Smart NY
- NY Energy Highway
- NY Green Bank
- The NY-Sun Initiative
- NYSERDA Incentives
Other Regional Initiatives

- Regional Sustainability Plan
- Regional Long-Range Transportation Plan
CITY OF ROCHESTER

Overview

- City Sustainability Initiatives
  - Office of Energy and Sustainability
  - Greenhouse Gas Inventory
  - Planning
  - Energy Efficiency
  - Renewable Energy
  - Transportation
  - Green Infrastructure
- NYPA Energy Master Plan Project Goals

CITY OF ROCHESTER

City Sustainability Initiatives

Established Office of Energy and Sustainability

- Secures funding to implement energy and sustainability projects ($6,677,436 total since 2009)
- Advocates for sustainable practices among City departments
- Manages initiatives to reduce greenhouse gases and energy usage
CITY OF ROCHESTER

City Sustainability Initiatives

Greenhouse Gas Inventory
- Completed 2011 for baseline year of 2008
- Addressed fossil fuel use in buildings, transportation, streetlights, water production and solid waste management
- Established goal of 20% reduction by 2020

GHG Emissions by Sector

City of Rochester
Government Emissions - CY2008
Total = 91,039 MTCO2E

CITY OF ROCHESTER

City Sustainability Initiatives

Planning
- Municipal Operations Climate Action Plan
- Permitting/ zoning updates to address PV (solar) and EV charging stations
- Comprehensive Plan Update – Community Climate Action Plan (funding through NYSERDA Cleaner Greener Communities Implementation grant)
- Harbor Management Plan
- Brownfields
  - Brownfield Opportunity Area planning program
  - Site cleanup and redevelopment

Five Cities Energy Master Plans
Albany • Buffalo • Rochester • Syracuse • Yonkers
CITY OF ROCHESTER

City Sustainability Initiatives

Energy Efficiency
- Energy audits at City-owned facilities
- Energy-efficient lighting
- Energy management systems
- Upgrade HVAC
- Building envelope improvements
- Energy efficient streetlights
- US Dept. of Energy Better Buildings Challenge Program
- Portfolio Manager to track energy usage in City facilities
  - 14% reduction in overall energy use from baselines, 11% reduction in source energy use intensity (kBtu/ft^2)
  - In facilities where energy efficiency measures were installed, 30% reduction in overall energy use from baselines and 23% reduction in site energy use intensity (kBtu/ft^2)

CITY OF ROCHESTER

City Sustainability Initiatives

Renewable Energy
- Renewable Energy Certificates purchased through Constellation Energy. 25% of the city's electricity is generated from green power
- Renewable energy at city facilities includes: geothermal at Riverside Cemetery, solar photovoltaic at Arnett Branch Library (44kW) and Rochester Public Market (15kW)
- Feasibility study for development of up to 2 MW solar energy on former landfill site for net-metering to a city facility through a power-purchase agreement
CITY OF ROCHESTER

City Sustainability Initiatives

Transportation
- Greening vehicle fleet
  - Integrate 300 alternative fuel vehicles (E-85, CNG, hybrid and electric)
  - Anti-idling policy
  - Automatic Vehicle Locator to optimize vehicle routes
  - Fleet right-sizing to remove less fuel-efficient vehicles
- Infrastructure for alternative fuel vehicles
  - Green Fuel Station (CNG, E85, biodiesel)
  - Electric Vehicle Charging Stations at 4 municipal garages, City Hall, Port of Rochester and Public Market
- Encourage walking and bicycling
  - Complete Streets Policy
  - Bicycle Enhancement Program – lane marking and signage on 15 centerline miles of arterial and collector streets
  - Increased bicycle patrols for Rochester Police Department

CITY OF ROCHESTER

City Sustainability Initiatives

Green Infrastructure
- City Hall Green Roof
- Green Street-Sawdey Way
- Porous Tree Pits
- Cornerstone Park
- Rain Gardens
- Permeable Pavement
  - Turning Point Park
  - City Hall
  - Port of Rochester
CITY OF ROCHESTER

Project Goals and Objectives
What the City of Rochester hopes to accomplish through the NYP Energy Master Plan project:

- Develop an energy plan that the City can use to help achieve its sustainability goals
- Build on the city's current Municipal Operations Climate Action Plan and contribute to the development of the community-wide Climate Action Plan
- Initiate a forum for collaboration with stakeholders on energy and sustainability issues
- Address issues not included in current city plans, including energy supply and distribution
- Develop a plan that can act as a template or guide for other businesses, non-profits, institutions, etc. to assist in reaching their energy goals
- Spur job growth in the energy sector
- Identify funding strategies to implement the plan

Data Collection and Analysis

Energy Usage
- Municipal (City government) Energy Usage
  - Buildings
  - Vehicle Fleets
  - Street lighting, other non-building accounts
- Community Energy Usage
  - Buildings
  - Vehicular travel within the City
    - Fleets
    - Private vehicles
Energy Infrastructure

- Energy Generation within the City
  - RG&E / Iberdrola
  - Government / Institutional
  - Renewable (solar, wind, hydro)

- Energy distribution Infrastructure
  - RG&E / Iberdrola
  - Rochester Steam Heating Cooperative

Programs, Regulations and Funding

- State and City Building and Zoning Codes
- State, Utility and Other Financial Incentives
- Energy Procurement Procedures
Discussion

- Planning process/Schedule
- Data collection and analysis
- Contributions of community stakeholders
- Other questions?

Next Steps

- Next 2 weeks:
  - Complete data collection and analysis
  - Identify alternative approaches
  - Prepare preliminary recommendations
- Late March
  - Discuss preliminary recommendations with Stakeholders
- April
  - Draft Plan
  - Discuss implementation with Stakeholders
CONTACT INFORMATION

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