

# **BEST PRACTICES**

**ENERGY FUTURE TASK FORCE  
TOWN OF CONCORD, MA  
SEPTEMBER 22, 2016**



# **CONCORD'S SUSTAINABILITY PRINCIPLES**

**ADOPTED JULY 25, 2011**

**GOAL: promote a sustainable future and meet current needs without compromising the ability of future generations to meet their needs.**

- 1) reduce dependence upon fossil fuels, underground metals, and minerals;**
- 2) reduce dependence upon synthetic chemicals and other manufactured substances;**
- 3) reduce encroachment upon nature; and**
- 4) meet human needs fairly and efficiently.**

# **HOW ARE WE DOING?**

**ENERGY**

**WATER**

**WASTE**

**AFFORDABLE HOUSING**

**MOBILITY**

**COMMUNITY ENGAGEMENT**

**SCHOOLS**

**FUNDING**



# **ENERGY**

**Approximately 20% renewable energy in CMLP portfolio**

**Solar on the Landfill (1.2 mW)**

**Solar Challenge 160+ rooftop contracts (1.2 mW)**

**Solar installations total 4807.48 kW (225 residential; 2 state; 2 town; 9 commercial; 4 town-wide)**

**All-electric vehicle for meter reading**

**Commercial Lighting Incentives to switch to LED's**

**SmartGrid to control hot water heaters; pool pumps, air conditioning**

**Conservation based rates**

# **GREEN COMMUNITIES DESIGNATION**

**DECEMBER 18, 2013**

**As-of-right siting and expedited permitting for renewable energy facilities**

**Stretch Code requirements for building construction and major renovations**

**Energy Reduction Plan to reduce Concord's municipal energy consumption in 5 years by 20% from 2011 baseline**

**Fuel-efficient vehicle policy**

**Grant funding: \$476,000**

# **WATER**

**Wetlands Bylaw**

**Six town wells**

**Nagog Pond Filtration**

**Storm Water Management Plan**

**Waste Water Management Plan**

**New Water Filling Stations**

**Water Conservation**



# **WASTE**

## **Department of Public Works Sustainability Initiatives**

**October Drop Off Swap Off – 851 vehicles**

**Green Demolition 51 Lawsbrook Road**

**92.83 % of the construction & demolition materials from the dwelling were recycled.**

**100% of concrete and asphalt recycled.**

# **AFFORDABLE HOUSING**

**Exceeds the state requirement for 10%**

**of residential units in affordable housing:**

**194 units in Concord Center - 20 sites plus 34 confidential addresses**

**124 units in West Concord – 12 sites plus 1 confidential address**

**350 units in Concord Mews**

**Percentage is adjusted with census every 10 years**

# **MOBILITY**

## **Roadways:**

**Battle Road Scenic Byway**

**Cambridge Turnpike reconstruction**

**Route 2 Crosby's Corner**

**Route 2 Rotary**

## **Trails:**

**Bruce Freeman Rail Trail**

## **Public Transportation:**

**MBTA**

**Parking**



# **COMMUNITY ENGAGEMENT**

**Healthy Communities**

**Community Food Assessment**

**Concord Business Partnership**

**Reduce / Reuse / Recycle**

**Concord Conserves: Workplace Energy  
Conservation Campaign**

**Green Your Heat - CSEC**

**Concord Climate Action Network**

**Mothers Out Front**



# **SCHOOLS**

**Concord Public Schools**

**Partner in Green Communities**

**Opportunities for improvements to existing buildings**

**Concord Carlisle Regional High School – rated the “greenest in state”—the most sustainable public high school ever constructed in MA**

**Largest investment**

**Energy efficient systems**

**High performance building envelope**

# **FUNDING**

**Town Manager's General Fund (TAXES):**

**Supports Planning Department, sustainability initiatives**

**Debt Authorization: Land acquisition**

**Community Preservation Act: \$1+M/year**

**Sawyer Trust Fund Gift: \$1.7M received in 2008 –expended for energy efficient town buildings**

**Sustainability Fund: to finance sustainable and conservation projects (goal \$100k/year)**

**Green Communities: \$147,000 initial grant**

# **FUTURE OPPORTUNITIES**

**Lease Town and school roofs for rooftop solar to leverage private funding (increases local solar generations without loss of trees/open space)**

**Encourage “green” building demolition and recycling as with 51 Laws Brook Rd**

**Solar on Parking Lots and other dual-use opportunities**

**Prospective codes and regulations**

**100% renewables**

# **BEST PRACTICES FT. COLLINS, CO**

- CARBON: REDUCE GHG (CARBON) 2%/YR**
- ENERGY: 20% RENEWABLES**
- TRANSPORTATION: ALTERNATIVE FUEL /  
DECREASED EMISSIONS**
- WASTE: ZERO WASTE / TRASH**
- EDUCATION AND OUTREACH:**
- BIODIVERSITY:**
- LOCAL FOOD SOURCES:**
- WATER: CONSERVATION**
- SUSTAINABLE PURCHASING:**
- SAFETY, HEALTH, WELLNESS:**

# **BEST PRACTICES CAMBRIDGE, MA**

- 1. NET ZERO EMISSIONS FOR NEW CONSTRUCTION**
- 2. TARGETED IMPROVEMENTS TO EXISTING BUILDINGS**
- 3. PROLIFERATION OF RENEWABLE ENERGY**
- 4. COORDINATED COMMUNICATIONS AND ENGAGEMENT**

# **BEST PRACTICES**

## **LEXINGTON, MA**

### **RESOLVED:**

**THAT THE TOWN (A) CONSIDER CLIMATE CHANGE IN ALL APPROPRIATE DECISIONS AND PLANNING PROCESSES; (B) TAKE ACTION TO PREPARE FOR THE IMPACTS OF A CHANGING CLIMATE; (C) REDUCE GREENHOUSE GAS EMISSIONS; (D) DEVELOP AND IMPLEMENT A COMPREHENSIVE CLIMATE ACTION PLAN; ALL WITH THE GOAL OF MAKING LEXINGTON A TRULY SUSTAINABLE COMMUNITY**

- 1. BETTER BUILDINGS**
- 2. ENERGY**
- 3. WATER / PUBLIC HEALTH AND SAFETY**
- 4. APPROPRIATE TOWN DECISIONS**
- 5. COMMUNITY ENGAGEMENT**

# **BEST PRACTICES**

## **CARLISLE, MA ENERGY USE PLAN**

**CARLISLE GREEN COMMUNITY**

**TOWN BUILDINGS - ENERGY USE**

**ANALYSIS OF INDIVIDUAL BUILDINGS**

**LAND**

**VEHICLE USE – OVERVIEW**

**DEPARTMENT VEHICLE USE**

**SUSTAINABLE CHALLENGES AND RESOURCES FOR  
RESIDENTS**

**MUNICIPAL CHALLENGES FOR THE ENERGY TASK  
FORCE**

**EDUCATIONAL PROGRAMS**

**SHORT TERM PLAN: 20% REDUCTION**

**LONG TERM PLAN 40% REDUCTION**

# **BEST PRACTICES**

## **CHICAGO CLIMATE ACTION PLAN**

**GOAL: BY 2020, 25% REDUCED EMISSIONS  
BELOW 1990 LEVELS**

**BY 2030, 80% REDUCTION GOAL FOR NEW  
AND RENOVATED BUILDINGS**

**-ENERGY EFFICIENT BUILDINGS**

**-CLEAN AND RENEWABLE ENERGY SOURCES**

**-IMPROVED TRANSPORTATION OPTIONS**

**-REDUCE WASTE AND INDUSTRIAL POLLUTION**

**-ADAPTATION**

# **BEST PRACTICES AUSTIN, TX CLIMATE PLAN**

## **NET-ZERO COMMUNITY-WIDE GREENHOUSE GAS EMISSIONS BY 2050**

**ELECTRICITY AND NATURAL GAS SECTORS**

**TRANSPORTATION AND LAND USE SECTORS**

**MATERIALS AND WASTE MANAGEMENT SECTORS**



# **BEST PRACTICES**

## **BURLINGTON, VT CLIMATE ACTION PLAN**

**GOAL: STOP THE INCREASE OF EMISSIONS AND BRING 2016 EMISSIONS DOWN TO 2010 LEVELS FOR ALL SECTORS (MUNICIPAL, AIRPORT, COMMUNITY WIDE)**

- 1. PROMOTE COMPACT MIXED USE DEVELOPMENT**
- 2. REDUCE COMMUNITY WIDE VMT BY 10%/CAPITA BY 2025**
- 3. REDUCE MUNICIPAL VMT BY 10% BY 2025**
- 4. DEVELOP ZONING, PLANNING AND ECONOMIC DEVELOPMENT POLICIES THAT SUPPORT LOCAL FOOD PRODUCTION.**
- 5. INCREASE ENERGY EFFICIENCY IN BUILDINGS**
- 6. INCREASE THE USE OF CLEANER AND RENEWABLE ENERGY SOURCES.**
- 7. INCREASE CARBON STORAGE AND SEQUESTRATION WITH ADDITIONAL FOREST AND TREE COVERAGE.**
- 8. REDUCE THE AMOUNT OF WASTE SENT TO LANDFILLS.**
- 9. ENSURE THE IMPLEMENTATION OF THE CLIMATE ACTION PLAN THROUGH CONSTANT COORDINATION WITH STAKEHOLDERS AND ANNUAL ASSESSMENT OF THE CITY'S PROGRESS.**