Environment Committee

Wednesday, June 10, 2015; 2:00 – 3:30 p.m.
Charlotte-Mecklenburg Government Center
Room 280

Committee Members:	John Autry, Chair Ed Driggs, Vice Chair David Howard Claire Fallon Kenny Smith
Staff Resource:	Hyong Yi, City Manager's Office

AGENDA

I. <u>Charlotte Water's Major Capital Projects</u>

Staff Resources: Carl Wilson & Barry Gullet, Charlotte Water

In order to provide Council more information and opportunity for input on the Charlotte Water Capital Investment Plan, the City Manager referred Charlotte Water's major capital projects to the Environment Committee prior to project initiation.

There are several major projects that have already completed the design work over the past couple years and are ready for bidding, two of which were reviewed by the Environment Committee in April (Water System Master Plan and Steele Creek Sewer Liftstation Replacement). The Committee will review three more that are ready to bid before September (Briar Creek Relief Sewer Phase 3, Paw Creek Forcemain/Taggart Creek Outfall, and Irwin Creek Wastewater Treatment Plan Upgrade Phase 2). Each of these latter three projects has estimated construction costs between $18 million and $35 million.

Action: For information only

II. <u>Update on Environment Focus Area Plan</u>

Staff Resource: Rob Phocas, Neighborhood & Business Services

Staff will provide an update on the implementation of the Focus Area Plan including several specific initiatives.

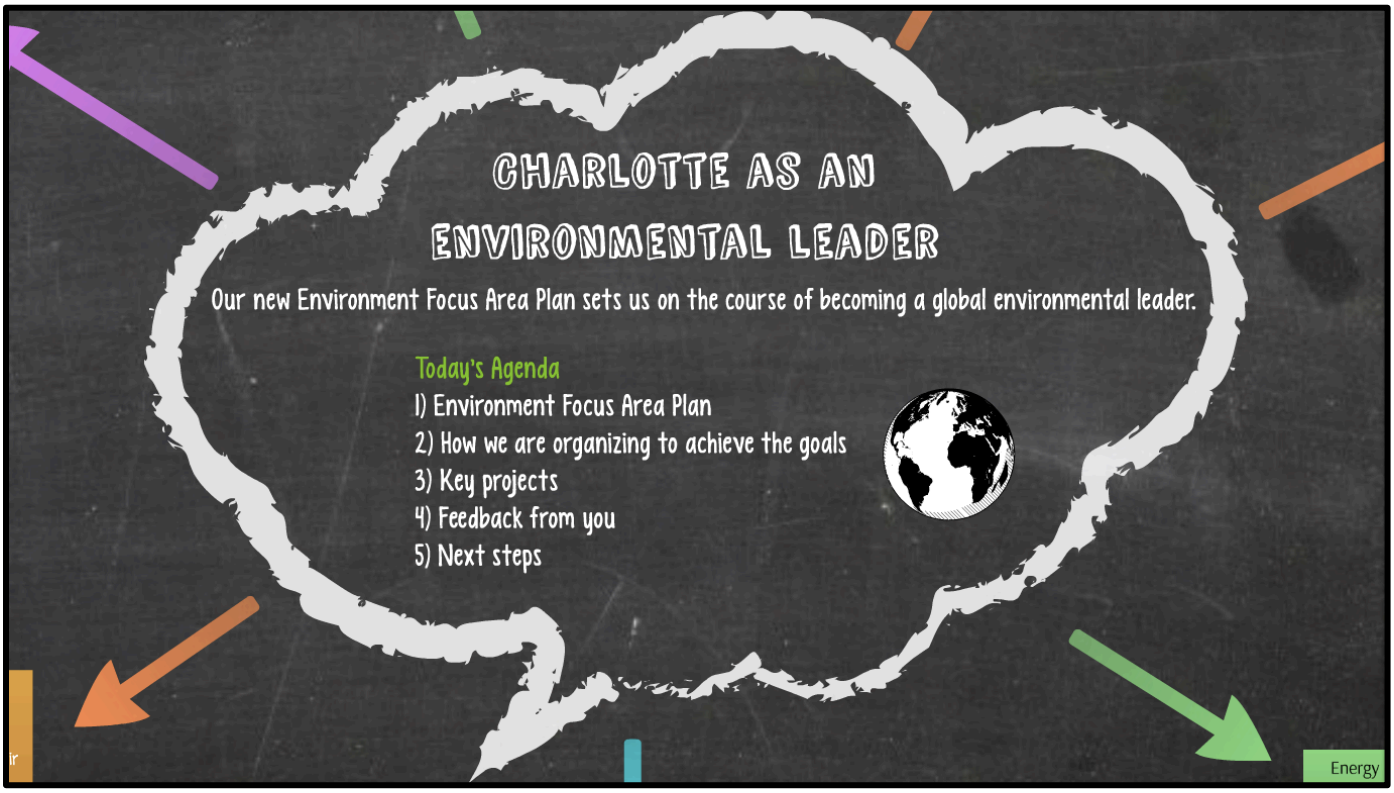
Action: For information only

<u>Attachment:</u> 1. Charlotte: Environmental Leader.pdf

<u>Next Meeting</u>

Wednesday, September 9, 2015; 2:00 – 3:30 p.m., Room 280

Distribution:	City Council	Ron Carlee, City Manager	Executive Team
	Bob Hagemann	Stephanie Kelly	Environmental Cabinet


CHARLOTTE AS AN
ENVIRONMENTAL LEADER
Our new Environment Focus Area Plan sets us on the course of becoming a global environmental leader.
Today's Agenda
1) Environment Focus Area Plan
2) How we are organizing to achieve the goals
3) Key projects
4) Feedback from you
5) Next steps
Energy

Environment

DRAFT: FY2016 Strategic Focus Area Plan

"Charlotte will become a global leader in environmental sustainability, preserving our natural resources while balancing growth with sound fiscal policy."

The City of Charlotte recognizes that environmental stewardship is fundamentally important to quality of life and essential to maintaining a vibrant economy. Protecting our natural resources, promoting conservation, and improving the environment all enhance the City's mission to preserve its citizens' quality of life.

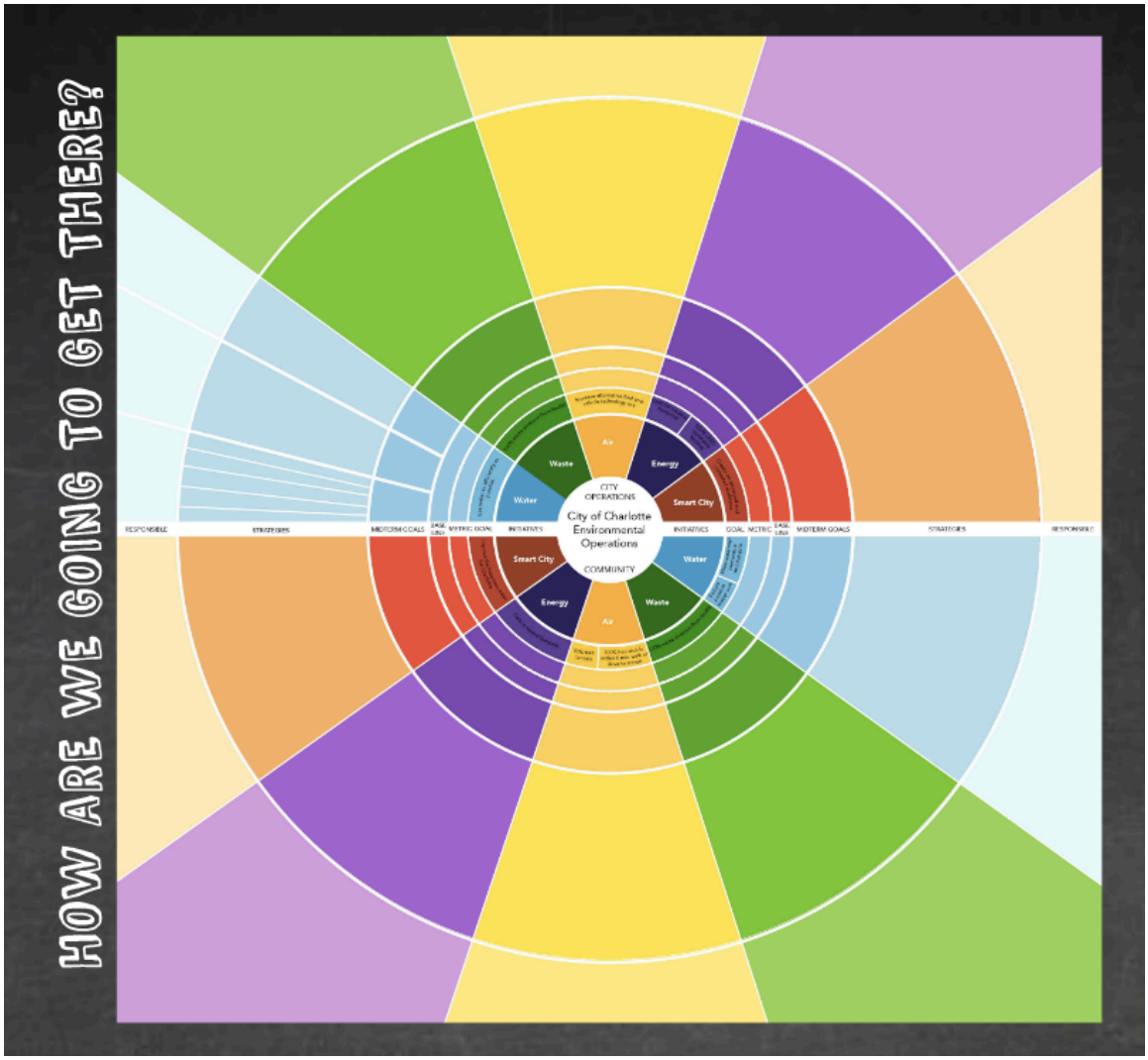
Charlotte will become a global leader in environmental sustainability by:

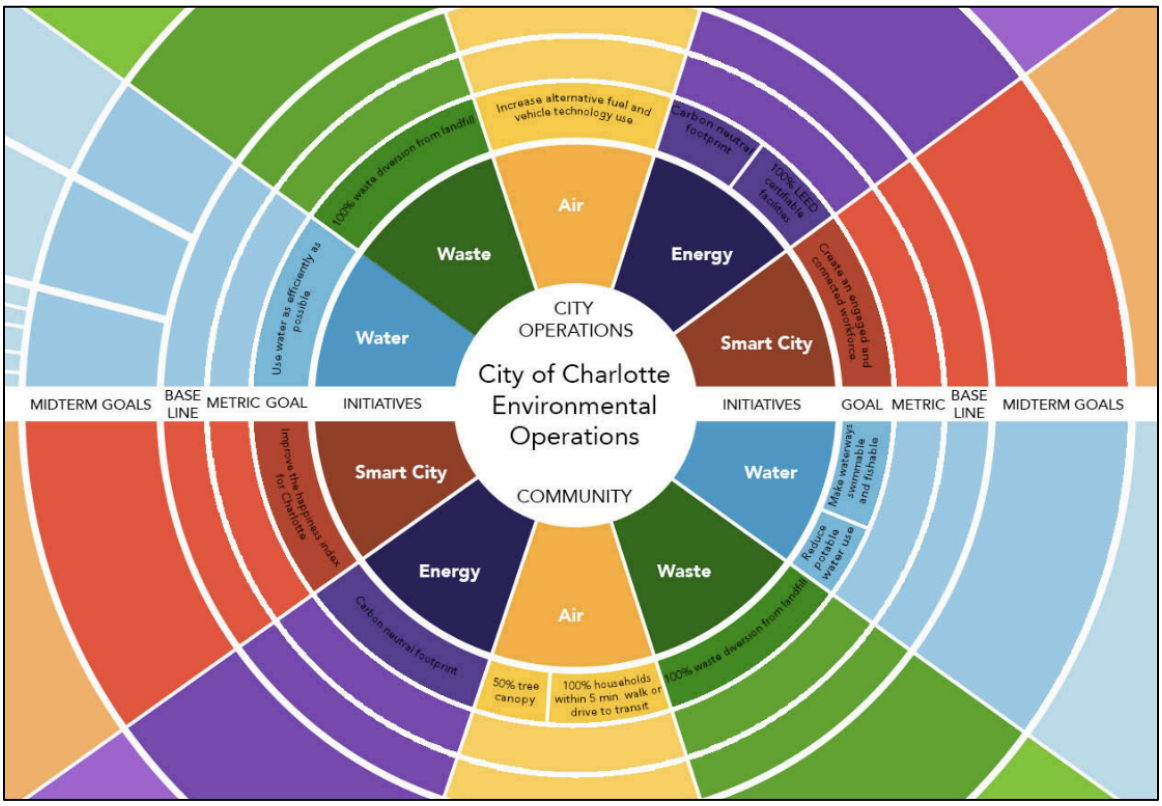
- Becoming a model environmental community in how it manages solid waste, energy, water and air;
- Leading by example by practicing environmental stewardship in City operations and facilities as directed through the Internal Environmental Operations Plan;
- Seeking and supporting collaborative and regional solutions to environmental problems;
- Applying technologies to develop "smart city" solutions to our environmental goals.

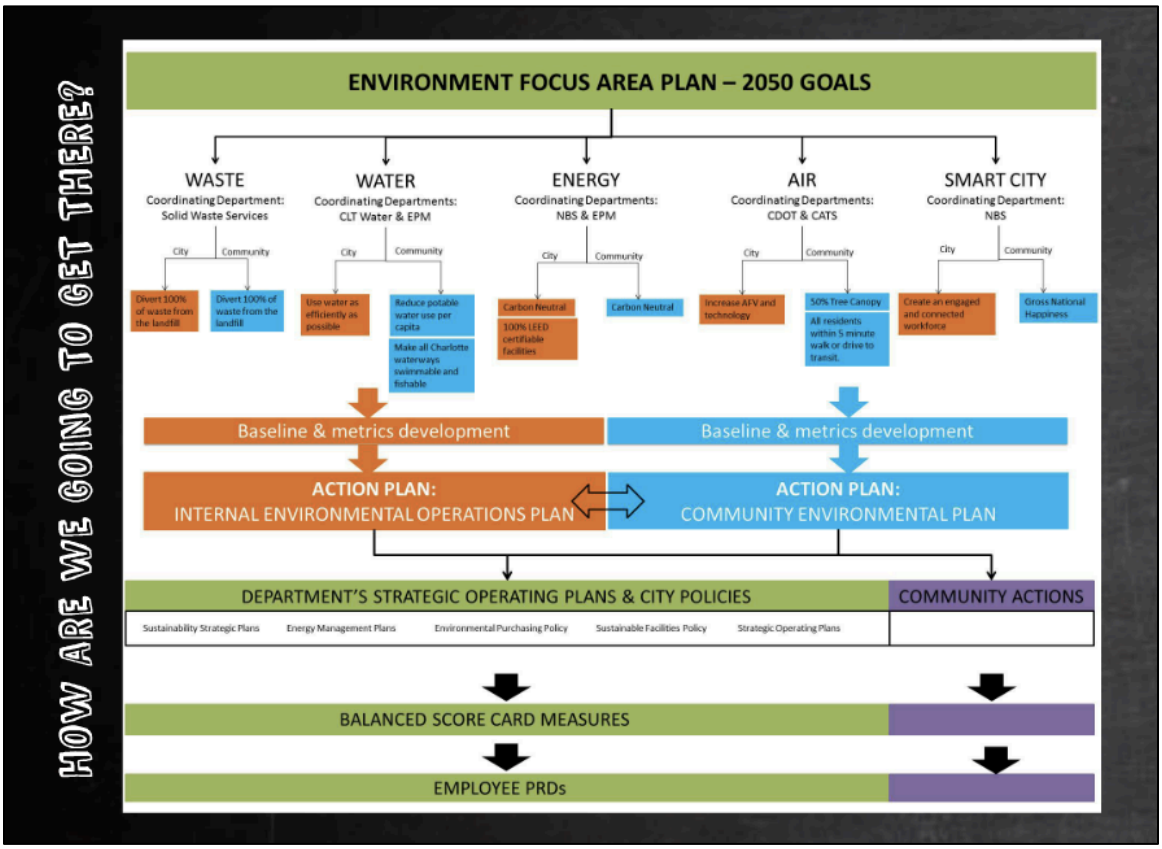
Specific initiatives to support these goals include:

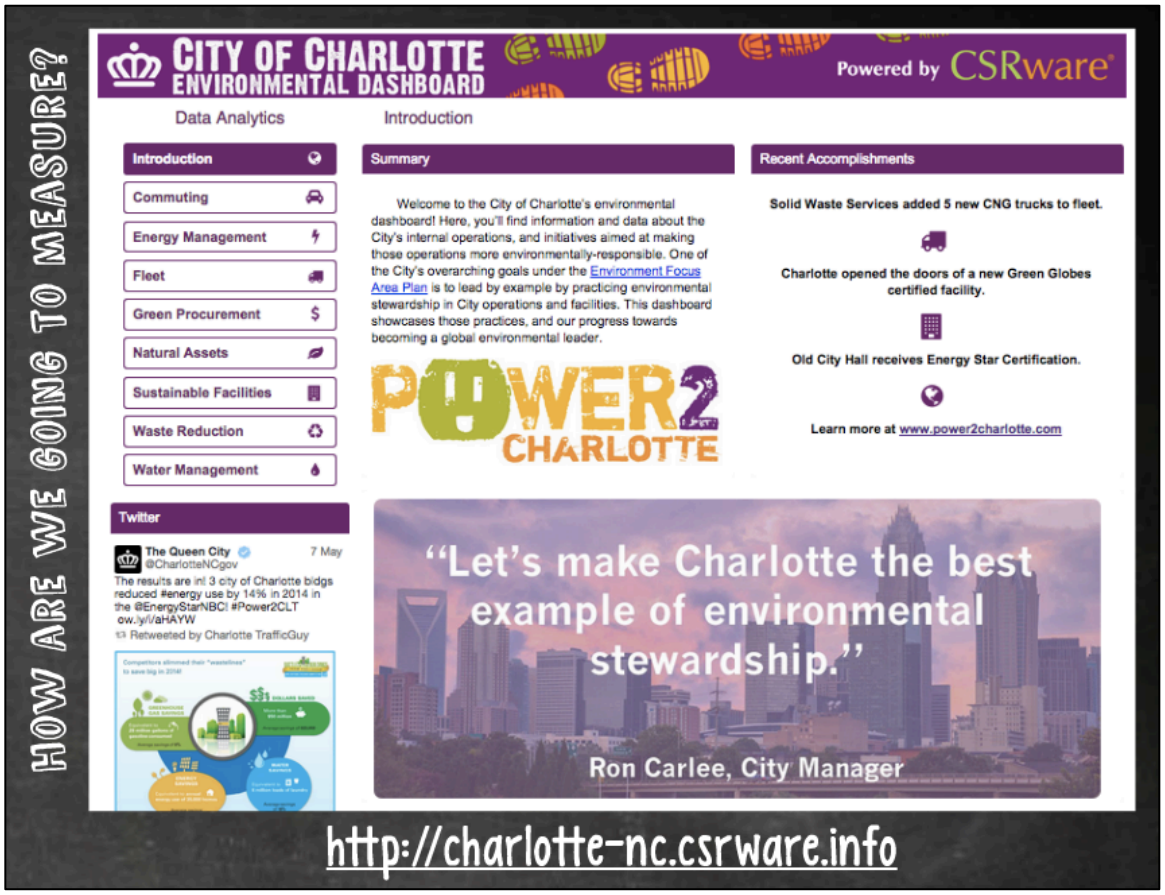
FY2016 Initiatives	Key Indicators – Community
Waste	• Develop baseline towards 100% achievement of waste diversion from landfill
Energy	• Develop baseline towards achieving carbon neutral footprint for the community
Water	• Develop baseline towards reducing potable water use per capita • Develop baseline towards making all Charlotte waterways swimmable and fishable
Air	• Develop baseline towards achieving 50% tree canopy • Develop a baseline towards 100% of households located within a 5 minute walk or drive to a transit option by 2050
Smart City	• Develop the Happiness Index for Charlotte

FY2016 Initiatives	Key Indicators – City Organization
Waste	• Develop baseline towards achievement of 100% waste diversion from the landfill
Energy	• Develop baseline towards achievement of carbon neutral footprint for City operations • Develop baseline toward 100% LEED certified or equivalent government
Water	• Develop baseline towards using water as efficiently as possible
Air	• Develop baseline towards increasing alternative fuel and vehicle technology use
Smart City	• Develop baseline towards creating an engaged and connected workforce


HOW ARE WE GOING TO GET THERE?
CITY OPERATIONS
City of Charlotte Environmental Operations
COMMUNITY
Air
Energy
Smart City
Water
Waste
RESPONSIBLE
STRATEGIES
MIDTERM GOALS
BASE LINE
MEETING GOAL
INITIATIVES
GOAL
METRIC


City of Charlotte Environmental Operations
CITY OPERATIONS
COMMUNITY
Waste
Air
Energy
Smart City
Water
Increase alternative fuel and vehicle technology use
Carbon neutral footprint
100% LEED certifiable facilities
Create an engaged and connected workforce
100% waste diversion from landfill
Use water as efficiently as possible
MIDTERM GOALS
BASE LINE
METRIC
GOAL
INITIATIVES
INITIATIVES
GOAL
METRIC
BASE LINE
MIDTERM GOALS
Improve the happiness index for Charlotte
Carbon neutral footprint
50% tree canopy
100% households within 5 min. walk or drive to transit
100% waste diversion from landfill
Reduce potable water use
Make waterways swimmable and fishable


HOW ARE WE GOING TO GET THERE?
ENVIRONMENT FOCUS AREA PLAN – 2050 GOALS
WASTE
Coordinating Department: Solid Waste Services
WATER
Coordinating Departments: CLT Water & EPM
ENERGY
Coordinating Departments: NBS & EPM
AIR
Coordinating Departments: CDOT & CATS
SMART CITY
Coordinating Department: NBS
City
Community
Divert 100% of waste from the landfill
Divert 100% of waste from the landfill
Use water as efficiently as possible
Reduce potable water use per capita
Make all Charlotte waterways swimmable and fishable
Carbon Neutral
100% LEED certifiable facilities
Carbon Neutral
Increase AFV and technology
50% Tree Canopy
All residents within 5 minute walk or drive to transit.
Create an engaged and connected workforce
Gross National Happiness
Baseline & metrics development
Baseline & metrics development
ACTION PLAN:
INTERNAL ENVIRONMENTAL OPERATIONS PLAN
ACTION PLAN:
COMMUNITY ENVIRONMENTAL PLAN
DEPARTMENT'S STRATEGIC OPERATING PLANS & CITY POLICIES
COMMUNITY ACTIONS
Sustainability Strategic Plans
Energy Management Plans
Environmental Purchasing Policy
Sustainable Facilities Policy
Strategic Operating Plans
BALANCED SCORE CARD MEASURES
EMPLOYEE PRDs


HOW ARE WE GOING TO MEASURE?
CITY OF CHARLOTTE
ENVIRONMENTAL DASHBOARD
Powered by CSRware
Data Analytics
Introduction
Introduction
Commuting
Energy Management
Fleet
Green Procurement
Natural Assets
Sustainable Facilities
Waste Reduction
Water Management
Summary
Welcome to the City of Charlotte's environmental dashboard! Here, you'll find information and data about the City's internal operations, and initiatives aimed at making those operations more environmentally-responsible. One of the City's overarching goals under the Environment Focus Area Plan is to lead by example by practicing environmental stewardship in City operations and facilities. This dashboard showcases those practices, and our progress towards becoming a global environmental leader.
POWER2 CHARLOTTE
Recent Accomplishments
Solid Waste Services added 5 new CNG trucks to fleet.
Charlotte opened the doors of a new Green Globes certified facility.
Old City Hall receives Energy Star Certification.
Learn more at www.power2charlotte.com
Twitter
The Queen City @CharlotteNCgov 7 May
The results are in! 3 city of Charlotte bldgs reduced #energy use by 14% in 2014 in the @EnergyStarNBC! #Power2CLT ow.ly/i/aHAYW
Retweeted by Charlotte TrafficGuy
"Let's make Charlotte the best example of environmental stewardship."
Ron Carlee, City Manager
http://charlotte-nc.csrware.info

Energy Secure Cities Coalition (ESCC)

What is it?

A project aimed at transitioning municipal fleets from vehicles powered by gasoline to ones powered by other fuels, primarily electricity.

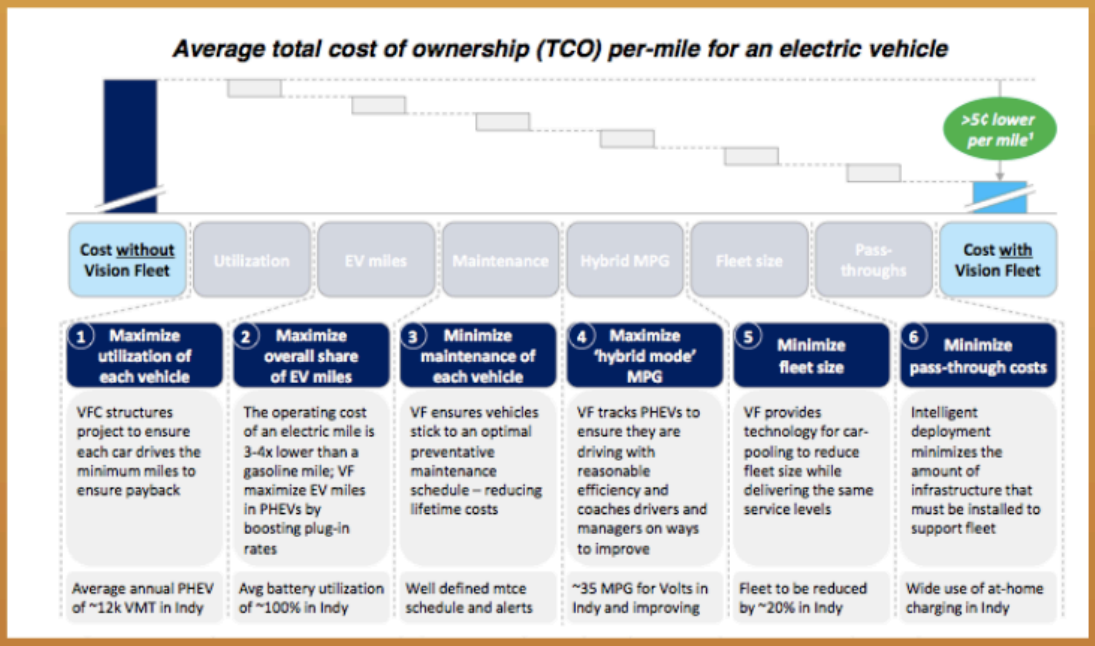
The ESCC is looking for 10 pilot cities to transition their municipal fleet.

How do we fit in?

Indianapolis Mayor Bullard has reached out to Mayor Clodfelter to participate in this project.

Charlotte representatives participated in an ESCC and Vision Fleet workshop.

Vision Fleet Model



How does this fit into our current work?

Heavy Duty Vehicles: Alternative Fuel RFI

CMGC Motor Pool Pilot

What are the next steps?

Meet with Procurement to discuss options to begin analysis of our light duty fleet.

Energy Efficiency in City Buildings

Energy efficiency leads to cost savings in operating the City's facilities.

What opportunities exist?

1. Temperature Set-Point
   - A 2-3 degree adjustment saves $60,000
   - A 3-4 degree adjustment saves $85,000

2. Plug Load: All the "stuff" plugged into the walls.
   - Impacts plug load for critical equipment
   - Impacts our Energy Star certifications
   - Costs money ~ $8,000 in CMGC

The Plan

HEATING SEASON

Occupied: Max of 70 degrees

Unoccupied: 55 degrees

COOLING SEASON

Occupied: Min of 75 degrees

Unoccupied: 85 degrees

PLUG LOADS

Restrict use of personal appliances to reduce plug load costs.

- Personal refrigerators ($30.00 – $100.00 to operate annually)
- Coffee makers ($35.00 – $55.00)
- Toaster ($30.00)

Next Steps

- Meet with Fire, Police and IT management
- Present final proposal to Executive Cabinet

What Works Cities?

Bloomberg Philanthropies $42 million initiative looking to work with 100 mid-sized cities to:

- accelerate our use of data to engage our citizens,
- make governments more effective, and
- improve people's lives.

How do we benefit?

- Access assistance targeted to our local needs and vision
- Connect with other participating cities
- Tap into new models and best practices

Charlotte has filled out an online survey stating our interest in participating.

Sustainable Facilities Policy

New Buildings & Major Renovations

- LEED v.4 certification
- Energy Star certification

Existing Buildings

- LEED v.4 EBOM certification
- Energy Star certification

Exceptions

- Cost premiums
- Alternate certifications

Sustainable Facilities Oversight Team

The review committee for all new construction , major renovations and LEED EBOM projects that fall under the purview of the City's Sustainable Facilities Policy.

Next Steps:

- Internal staff meeting to finalize details
- Manager's Cabinet
- Full Council

Property Assessed Clean Energy (PACE)

What is it?

Why are we investigating this program?

Status of enabling legislation

Charlotte PACE program

What does it look like?

Who are our partners?

- Envision Charlotte
- Simon Properties
- Family Dollar

Smart Cities

Envision Charlotte

- Pillar Update: Energy, Water, Waste, Air
- National & international recognition
- Smart City conferences
- DOE Grant – $500,000

Siemens Project

- R&D smart city project
  - Envision Charlotte
  - Innovation Corridor
- Partners
  - UNC-Charlotte
  - Duke Energy
  - Center City Partners
- Next Steps
  - White House Office of Technology
  - Duke Energy
  - Scope development

Global City and Community Coalition (GCCC)

International smart city collaborative

Partner Cities

Charlotte, NC
Austin, TX
Chicago, IL
Eindhoven, Netherlands
Amsterdam, Netherlands
Milan, Italy
Genoa, Italy
Bandung, Indonesia

Goals

1) Best practices and technology sharing
2) Public private partnership models
3) Standardization of language

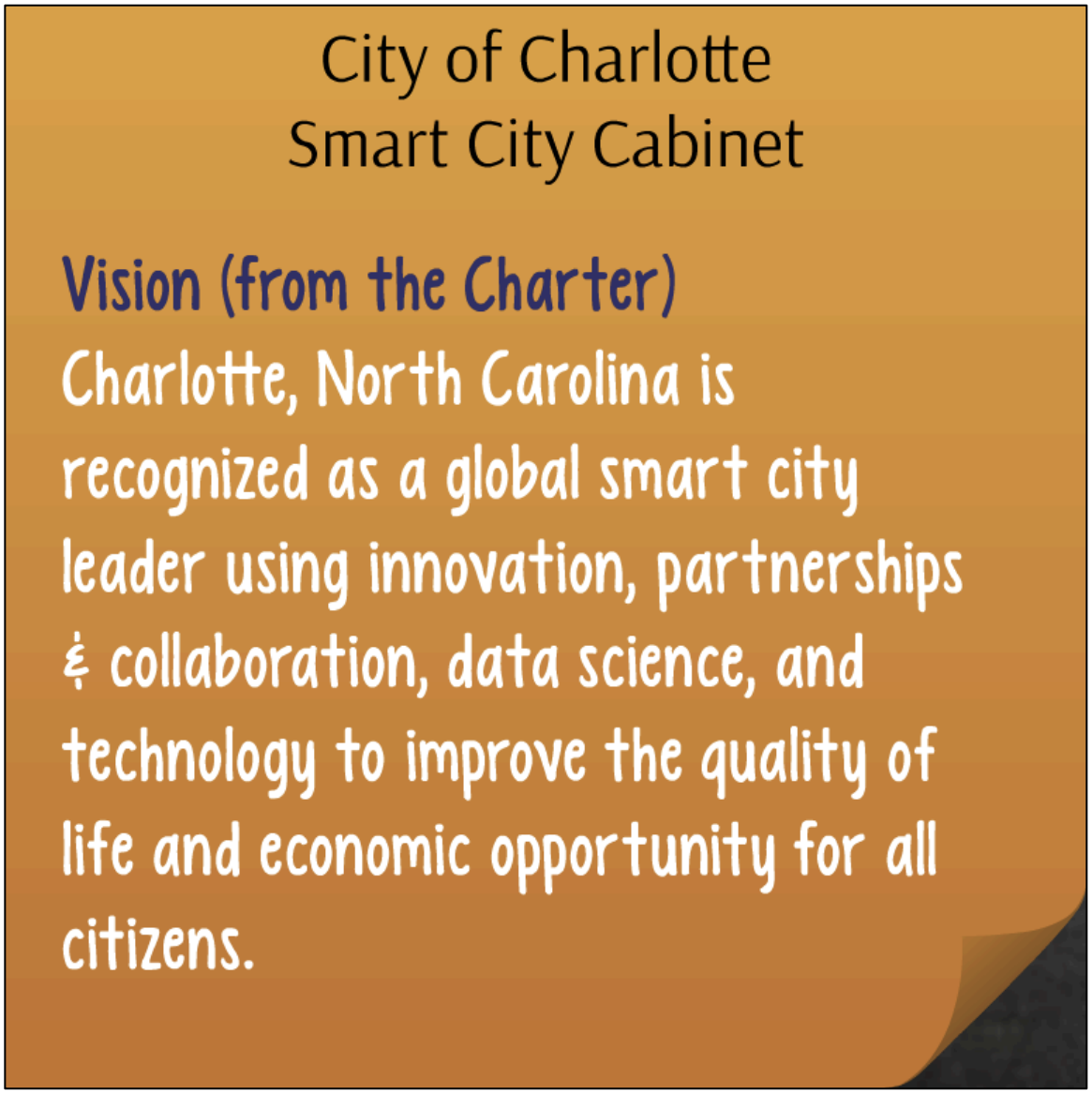
M Schools

What is it?

A program developed by the Mobile World Capital in Barcelona to teach middle school children to code and program.

Partnership opportunity with Discovery Place

- bringing a proven STEM program to Charlotte
- incorporating into CMS
- incorporating into DP's Education Studio


City of Charlotte
Smart City Cabinet
Vision (from the Charter)
Charlotte, North Carolina is recognized as a global smart city leader using innovation, partnerships & collaboration, data science, and technology to improve the quality of life and economic opportunity for all citizens.

Demonstration Project Policy

How can we test ideas faster?

A partnership to test, evaluate and/or demonstrate innovative solutions using City land, facilities, equipment, right of ways, and City data.

Benefits

- Take advantage of emerging technologies
- Innovation
- New economic development tool

Goals

- Create new markets and new jobs
- Improve quality/efficiency of City services/operations
- Advance the City's effort towards being a global leader
- Educate the public about innovative solutions