

Arlington's Community Energy Project

Ensuring a Competitive and Sustainable Community



Civic Federation Meeting
March 6, 2012

- **Brief background**
- **Update on progress**

Community Energy Project: Background

Competitiveness

- Energy cost
- Employment
- Investment



Security

- Supply security
- Supply quality
- Flexibility

Environment

- Greenhouse Gas Reduction

Three Groups of Benefits

Arlington Community Energy Framework

- *Energy efficiency – If you don't need it - don't use it*
- *Heat Recovery – If it's already there – use it*
- *Renewable energy – If it makes sense, go carbon free*
- *Energy distribution – Invest where it makes sense*

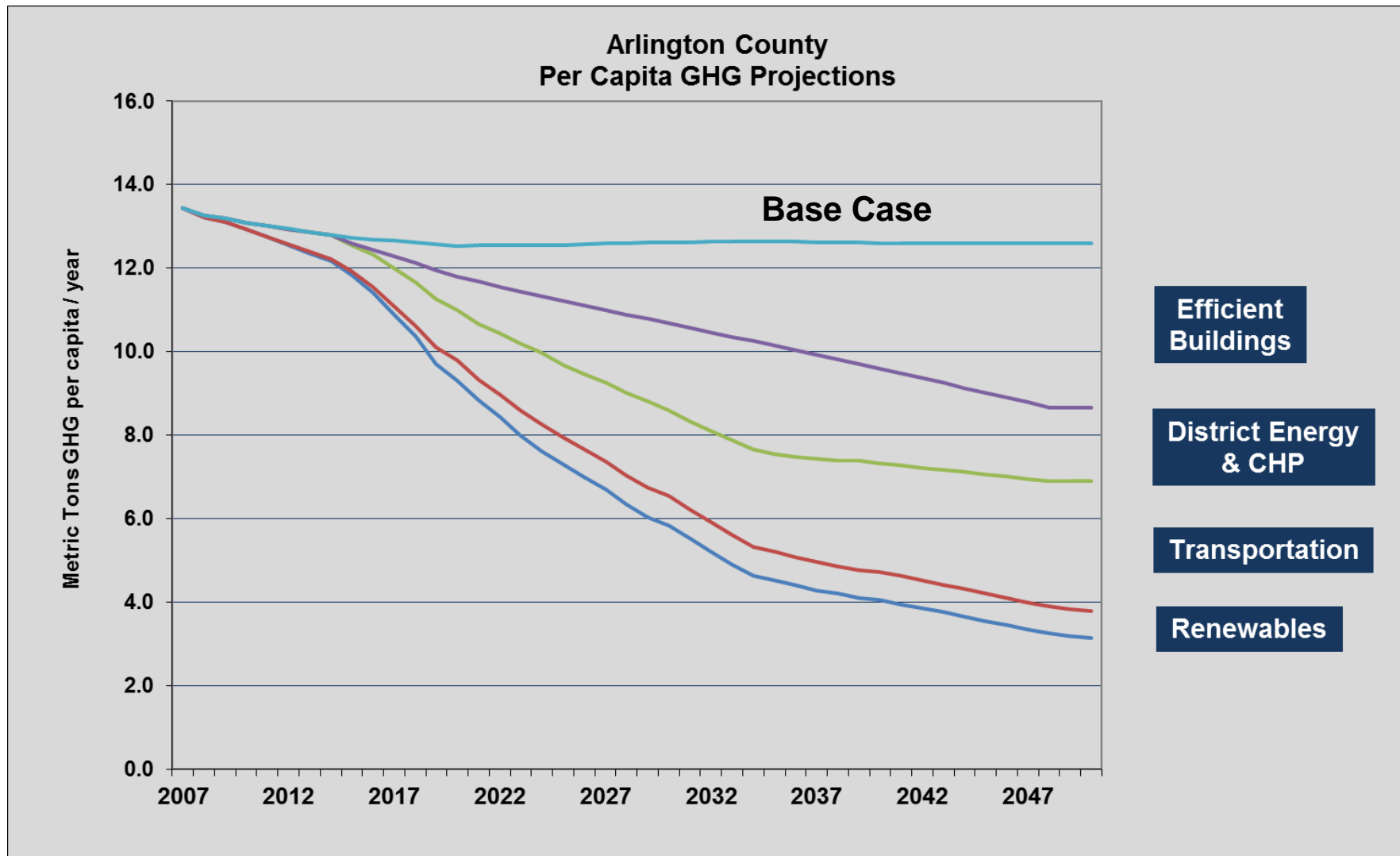
Integrated Solution – Tailored for County!

Headline Target: 2050 Greenhouse Gas Emissions

- **Task Force recommends a GHG emissions target of 3 metric tons (mt) CO₂e/capita/year by 2050.**
- In 2007, Arlington produced 13.4 mt CO₂e/capita/year
- Task Force also recommended Arlington's target for 2050 be 2.2 mt CO₂e/capita/year if regional energy plan established.

Per Capita GHG Emissions

Impacts of Key Energy Policy Recommendations

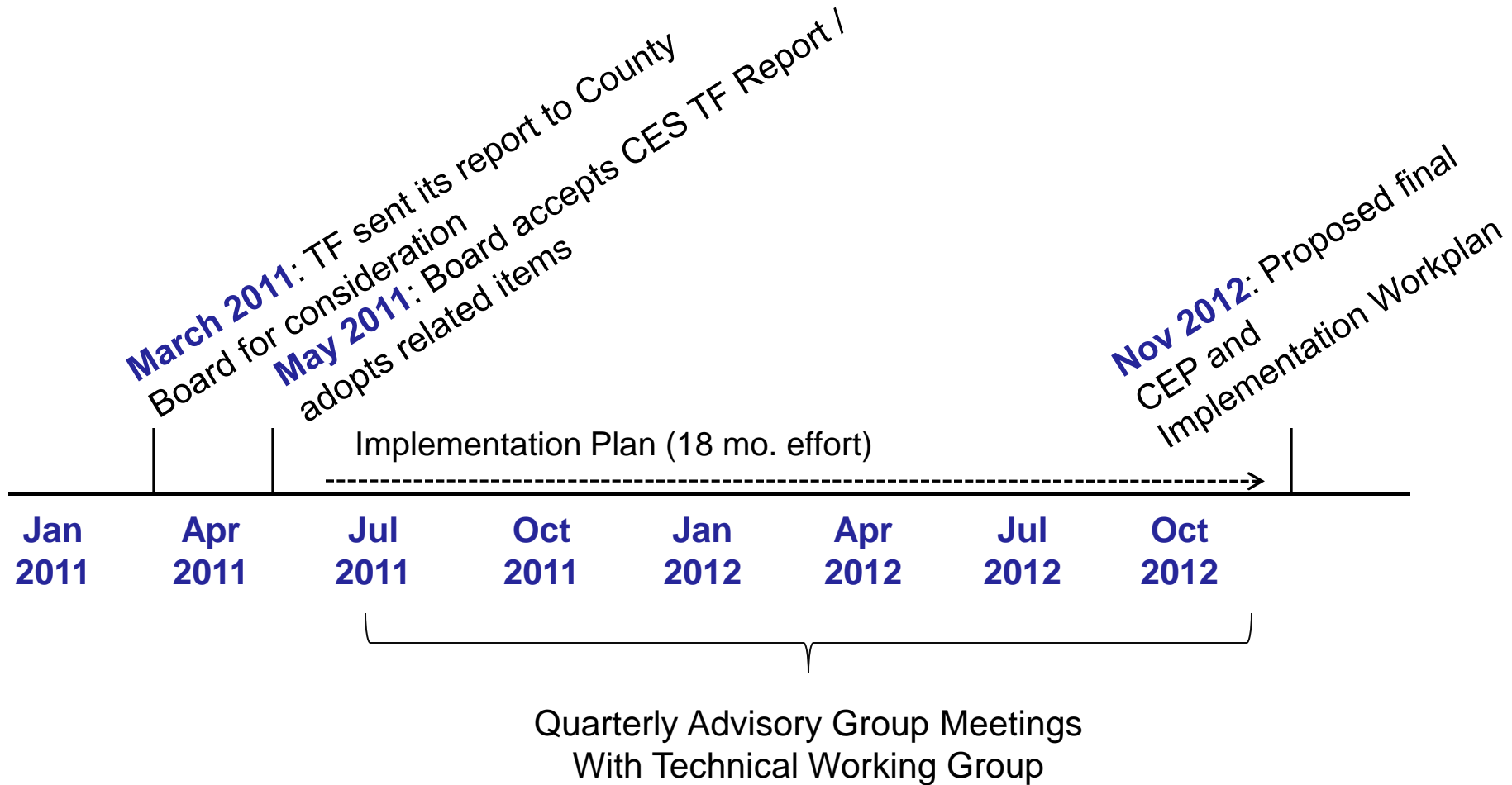


■ Five Transformation Groups:

- *Buildings*
- *District Energy / Renewable Energy*
- *Transportation*
- *Education & Outreach*
- *Finance*



Timeline

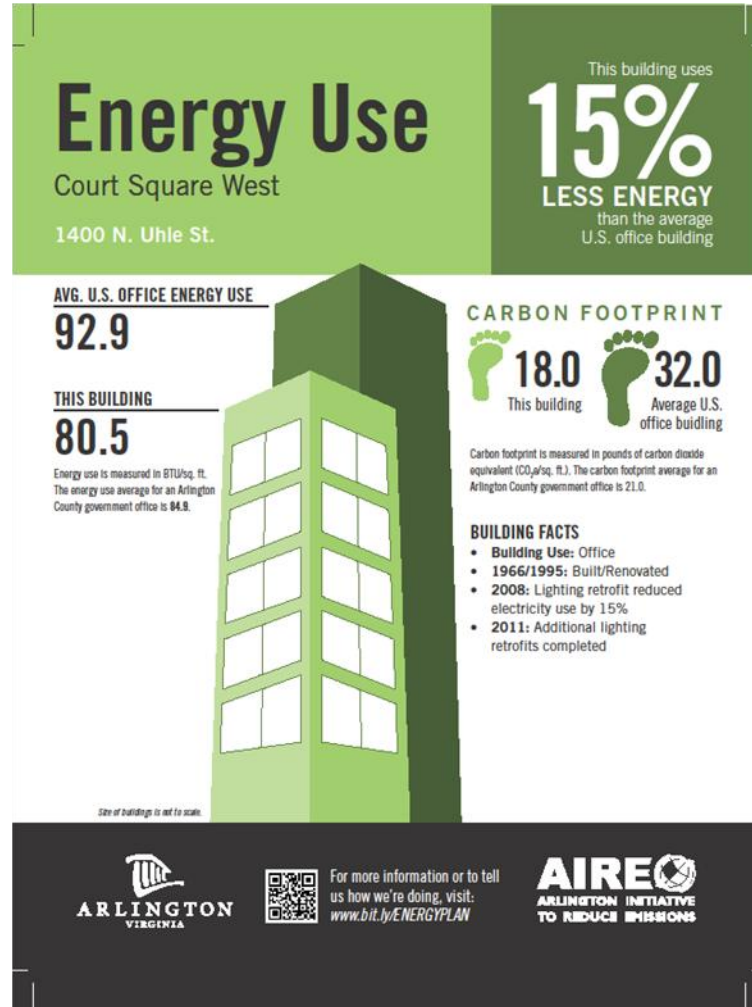


Buildings

- Increase energy efficiency in new and renovated homes and buildings, on the order of 30% to 50%
 - *B1 and B2 -- Efficient construction and equipment*
 - *B3 -- Operations and maintenance*
- B4 -- Create mixed-use, net-zero energy Scale Project



■ S2– Energy Performance Labels



Completed:

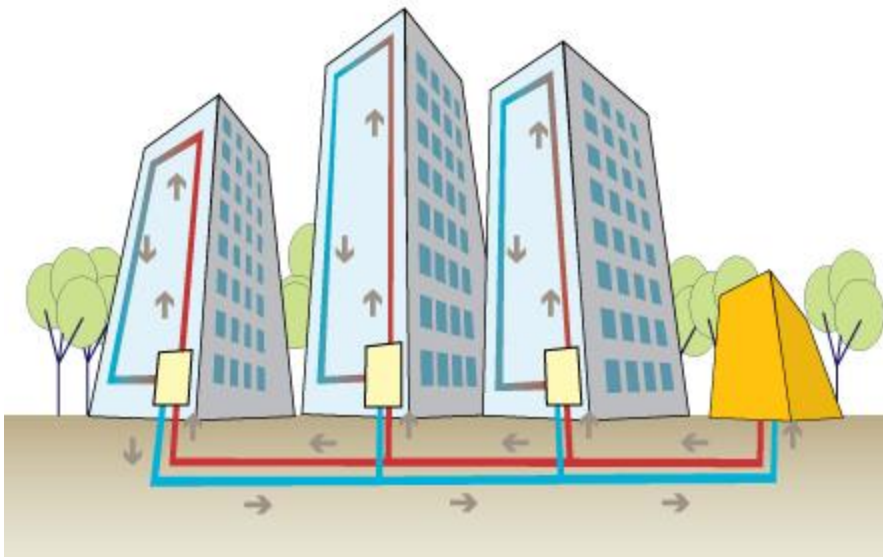
- *Finalized design for building energy performance label and installed labels in some County buildings*

Near-term efforts:

- *Establish detailed baselines of building characteristics and energy use by building type -residential and non-residential*
- *Investigate changes to VA Housing Development Authority (VHDA) rules*

District Energy Systems

- DE1 – Establish District Energy systems in high-density areas



Centralized supply and delivery

- *Heating*
- *Cooling*
- *Domestic hot water*

Widely deployed - proven technology

Renewable Energy

- RE1 – Increase use of solar photovoltaics
- RE2 – Increase use of renewables in low-density settings



Completed:

- *Conducted District Energy workshop for Engineers, Architects, and building owners (Nov. 2011)*

Near-term efforts:

- *Evaluate financial options for District Energy Utility in Arlington*
- *Clarify District Energy-Ready economics*
- *Advance Integrated Energy Master Plan (IEMP) efforts in Crystal City*
- *Evaluate solar potential in Arlington*

- T1 -- Reduce vehicle miles traveled
- T2 -- Support federal efforts to increase vehicle fuel efficiency
- T3 -- Support the reduction of carbon content in fuels



Near-term efforts:

- ***County purchasing fuel-efficient vehicles; smart fleet mgmt***
- ***Use B20 biodiesel in County/APS fleet operations***
- ***Install electric vehicle (EV) infrastructure for County fleet use***
- ***Facilitate EV infrastructure development in private sector***
- ***Use "C-Net" Connect Arlington smart traffic light signal to improve rush hour traffic flows***

Education & Outreach

- S1 – Institutionalize energy planning
- S3 -- Community input / energy literacy
- S4 -- Education and training
- S7 -- Regional energy planning



Near-term efforts:

- ***Technical Work Group to weave CEP into all aspects of County activities***
- ***Identify specific metrics for monitoring progress toward Task Force goals***

- S5 -- Financing and incentives
- S6 – Register and report GHG emissions



Near-term efforts:

- ***Northern VA Home Performance with Energy Star program, run by Local Energy Alliance Program (LEAP)***
- ***Promote existing incentives for building efficiency and renewable energy improvements***
- ***Review other potential incentive programs to potentially implement***



ARLINGTON COMMUNITY
FEDERAL CREDIT UNION



Tools / Incentives under consideration

- Utility rebates
- Tax credits
- Property tax assessments/exemptions
- Site plan conditions/bonus density
- PACE
- Revolving loan funds
- On-bill financing
- Loan-loss reserve funds
- Interest rate buydowns/credit enhancement

Future CEAG Meeting Dates

April 20, 2012

July 20, 2012

October 12, 2012

ACTION ITEMS

- **Spread the word about the CEP efforts –**
<http://freshaireva.us/2011/12/energyplan/>
- **Let people know about the Northern VA Home Performance with Energy Star program run by LEAP –**
<http://leap-va.org/novahpwes>
- **Tell people about the competitive energy efficiency project financing options made available by Arlington County Credit Union -** *<http://www.arlingtoncu.org/>*
- **Support the use of District Energy in high energy use intensity neighborhoods**