

ENERGY TRANSITION FRAMEWORK

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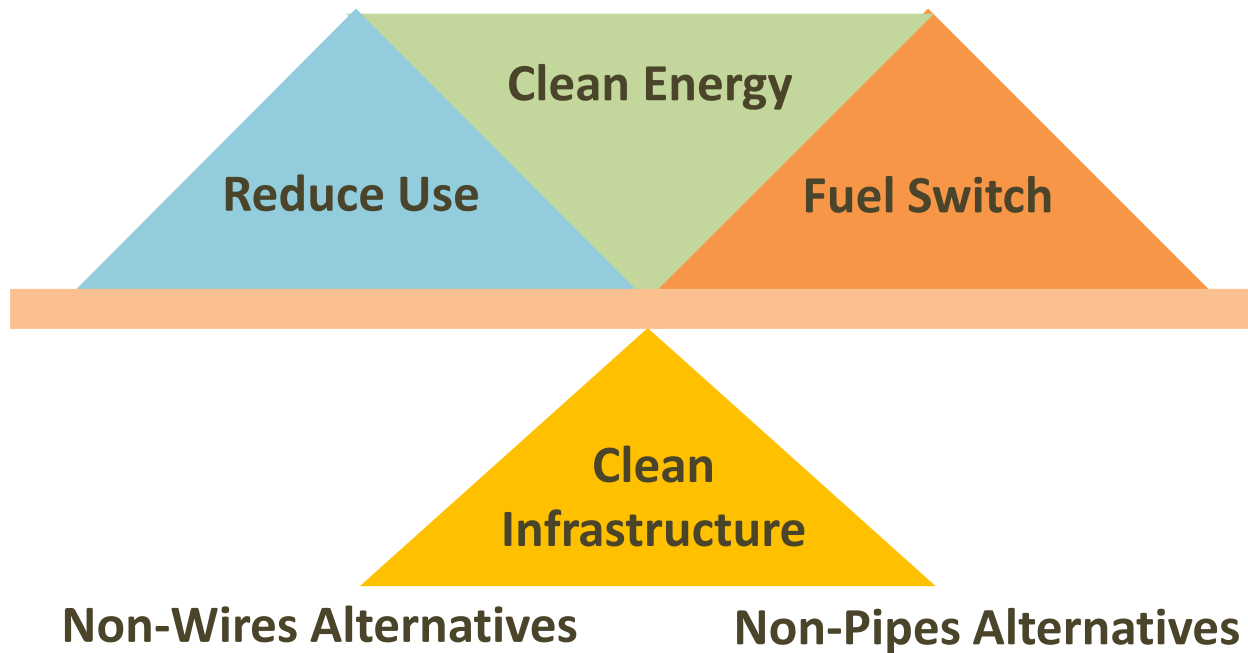
District of Columbia Department of Energy and Environment

November 18, 2020

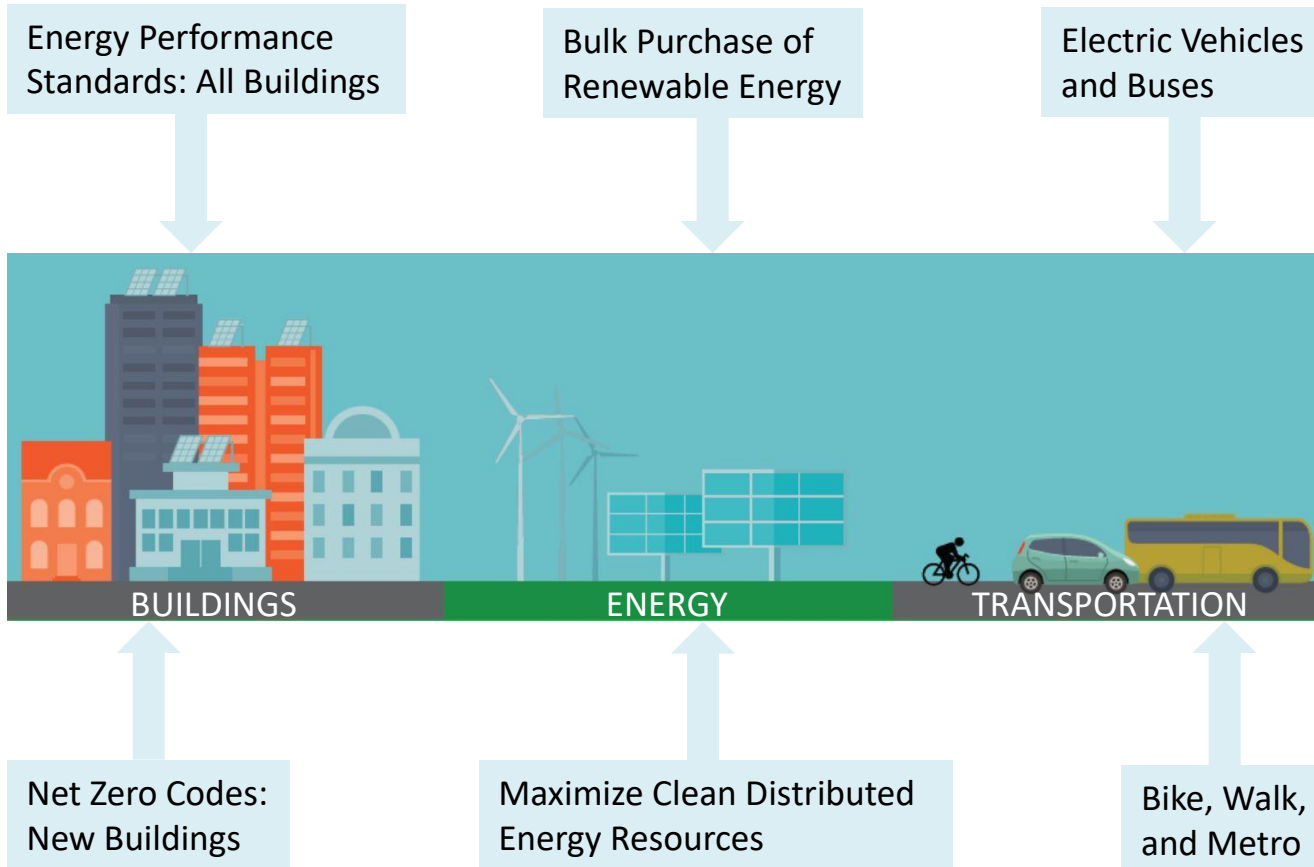


ENERGY TRANSITION APPROACH

Deep Decarbonization Pathway Framework



IN PROGRESS



ENERGY TRANSITION APPROACH

Clean Energy DC Plan

“To achieve its 2032 GHG target, the District will clearly need to shift away from fossil fuels for buildings (natural gas and fuel oil)....”

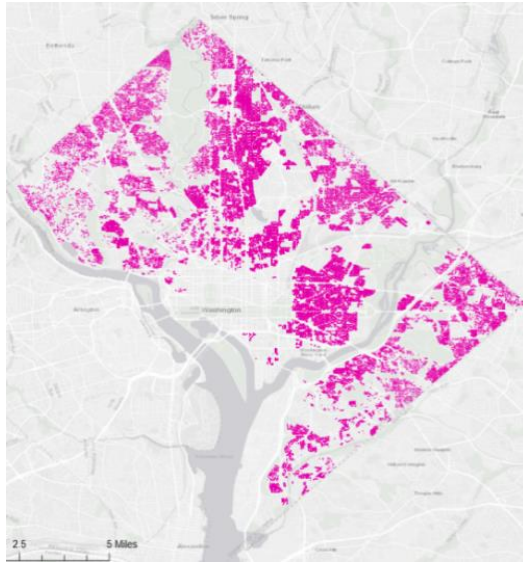
Planning to maximize benefits

FOSSIL FUEL BUILDINGS	<ul style="list-style-type: none">• Locational analysis• Easy to Hard
LOCAL RENEWABLE GENERATION POTENTIAL	<ul style="list-style-type: none">• Potential for DER and weatherization• Environment, revenue, equity
GRID CAPACITY	<ul style="list-style-type: none">• Solar hosting capacity• Distribution system capacity
PIPE REPLACEMENT COST	<ul style="list-style-type: none">• Cost offset• Reduce system-wide stranded costs
VIRTUAL POWER PLANT = REDUCE FOSSIL FUEL PEAKERS	<ul style="list-style-type: none">• DR to reduce reliance on dirty peakers• Hourly GHG profiles of buildings & peakers

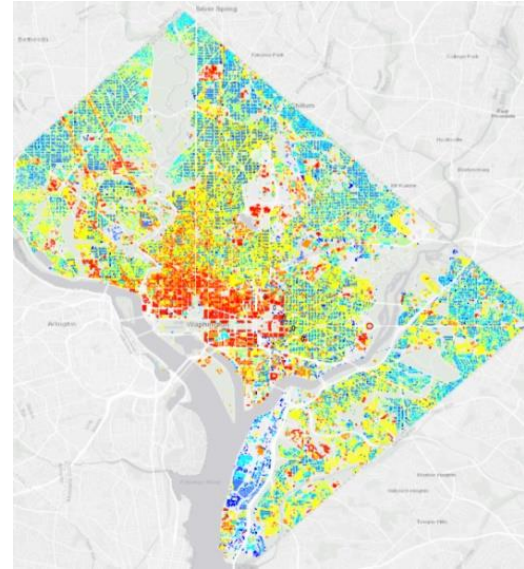


DATA SYNTHESIS: MAPS & CHARTS

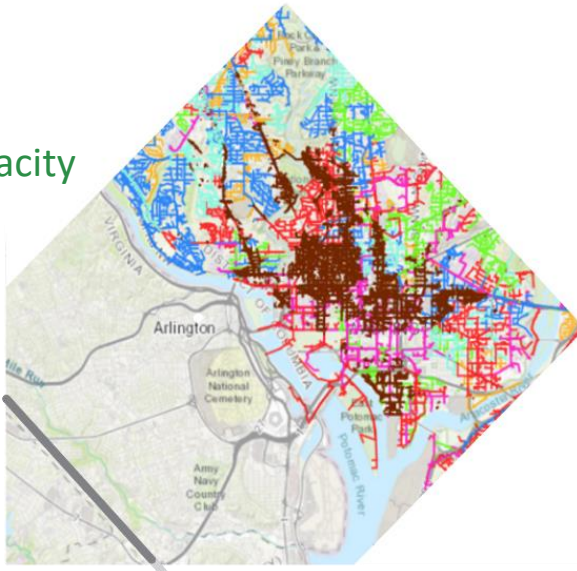
1. Buildings using NG



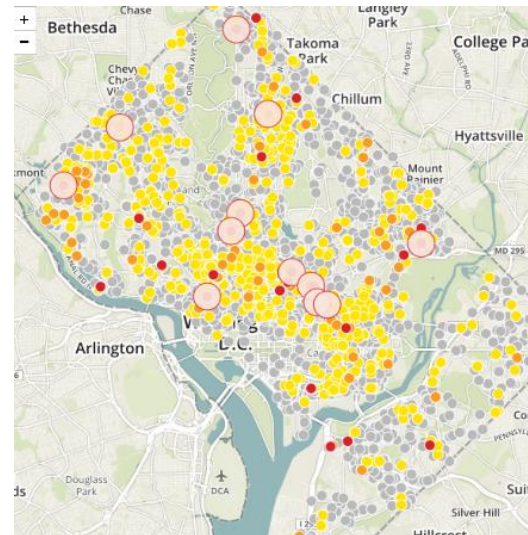
2. Solar offset potential



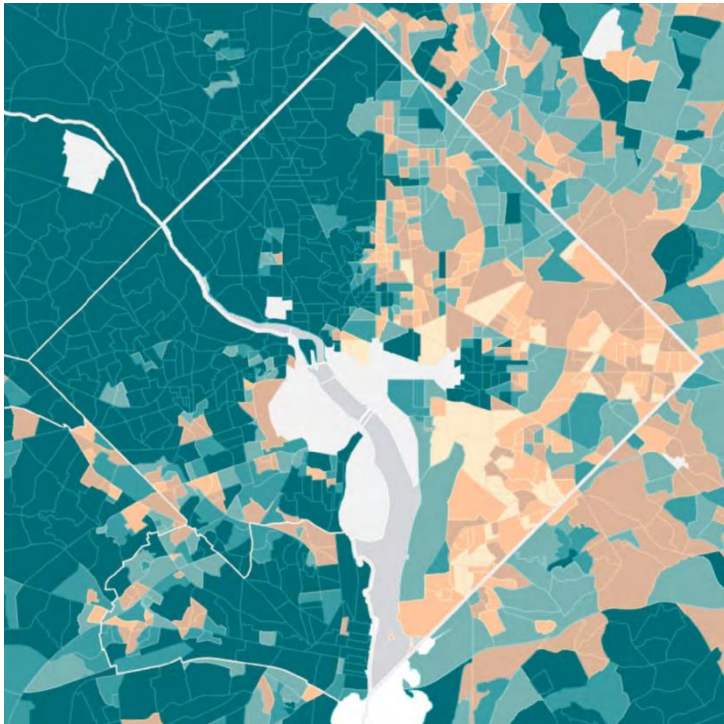
3. Hosting capacity



4. Methane leak survey



DATA SYNTHESIS: MAPS & CHARTS



Income



Energy Use



STRATEGIC ELECTRIFICATION ISSUES

BUILDINGS

- Hourly load profiles for 13 building types

TRANSPORTATION

- Allocation of L1 and L2 charging
- Commuter vs DC resident travel

GRID EMISSIONS

- Hourly marginal emissions
- Projection of grid mix

GRID ASSESSMENT

- Capacity at the substation level
- Assess locational impact

IMPACT MITIGATION

- Examine NWA feasibility for new peak locations

CUSTOMERS

- Education
- Choice

WORKFORCE

- Pay equity



QUESTIONS

