

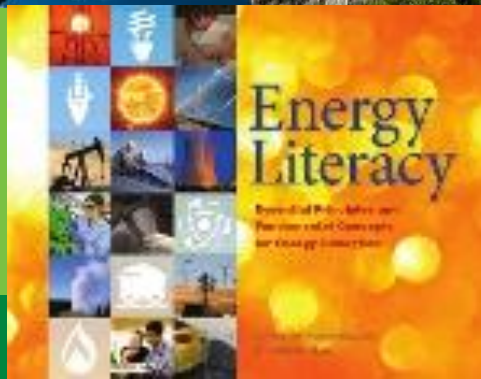
Energy Is Everywhere!

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Webinar Series sponsored by
Housing and Urban Development,
Department of Energy and
Department of Education



Opportunities for Youth
11.20.2014

- Welcome and Intro to Webinar Series (HUD)
- Conversation with Corps Network on Opportunities for Youth (GCF and NYCHA)
- Career and Technical Education (Dept. of Education)
- Q & A

You are on mute! Use your webinar bar to fill out poll or chat to send in a question.



- In public housing, we provide housing assistance for 1.1 million public housing units, and 2.2 million tenant based vouchers totaling 3.3 million.
- Total Utility expenditures for Public and Assisted Housing FY2011 was estimated at \$7.1 billion dollars
- Of that amount, PHA utility expenditures were \$1.5 billion dollars, consuming 22% of PHA operating expenses FY11.

- Reduction in Utility Expenditures
 - Generates Savings for PHAs
 - Reduces taxpayer burden
 - More savings for resident programs
 - Increase energy literacy for PHAs and residents

Energy is Everywhere: Opportunities for Youth in Energy



**The
CorpsNetwork**

Strengthening America through
service and conservation



A conversation with:

The Corps Network (TCN)

Green City Force (GCF)

New York City Housing Authority (NYCHA)



The Corps Network



- Corps descended from **CCC**
- Represents **120+** Corps working in every state & DC
- Enroll over **25,000** youth each year
- **Demographics:**
 - 60% below poverty line
 - 55% unemployed
 - 30% not in school/no GED or HSD
 - 20% court-involved
 - 35% women
 - 48% minorities



The Corps Network



The Corps Model: adult mentors (Crewleaders) guide crews of youth Corpsmembers (16-25 & older veterans) to perform service and conservation projects in communities or on public lands. Tied to those projects, Corpsmembers receive educational, workforce development, and supportive services.

The Corps Network



Elements within The Corps Model

Conservation & Service Projects: Brownfields & Hazards Remediation; Disaster Recovery & Response; Energy/Water Efficiency & Weatherization; Green Infrastructure; Habitat & Ecosystem Restorations; Historic Preservation & Construction Trades; Horticulture & Landscaping; National Service (AmeriCorps); Renewable Energy; Transportation & Trails; Urban Agriculture & Forestry; Urban Development & Infrastructure

Education: Core Skills Competencies; GED & HSD; Charter Schools; Postsecondary Success; Informal STEM; Service Learning; AmeriCorps Education Awards; Mentoring

Workforce Development: Industry-Recognized Credentials & Certificates; Essential (Soft) Skills; Employer Partnerships; WIB/One-Stop Collaboration; Career pathway planning; Resume Development; Job Shadowing

Supportive Services: Counseling, Transportation, Healthcare, Childcare, Public Aid Referrals, Court-Involvement Liaison; Case Management/Check-ins

The Corps Network



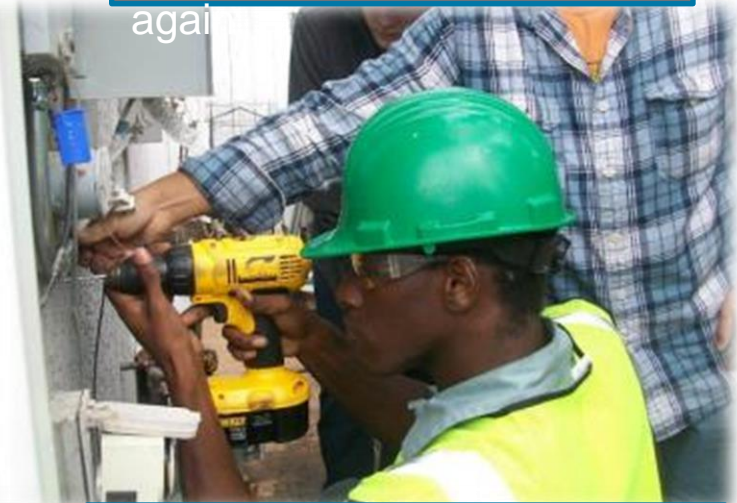
Working with Corps

Corps handle recruiting and assume administrative responsibilities of managing a workforce, including the provision of health care, worker's compensation, stipends, and liability insurance. They provide environmental education, safety training, tools, food, and supplies. They employ skilled and experienced crew leaders and project directors to supervise the youth and oversee the work.

Corps crews are self-contained including supervision, transportation, tools, gear, equipment, insurance, back-end support, and technical expertise. Corps also have the capacity and experience leading large volunteer projects, mobilizing and managing local volunteers and

99% of all federal project partners surveyed say they would work with Corps

again



Research from the National Park Service indicates using Corps saved 65% in project costs and over \$50,000 on average when compared to what it would cost to

The Corps Network



Corps & Energy Projects

- Energy audits, weatherization, retrofits, installation, and community outreach
- 25 Corps work on energy projects – many more are interested in partners
- Funded through AmeriCorps, ARRA, WAP, and LIHEAP among other areas – project work is important as well
- Some recruit from public housing already
- Corpsmembers receive training and education in-class and in-field on basic competencies and earn key certificates leading to employment
- Corpsmembers receive a stipend – for some this can be a “first-job” and build a resume
- Diverse demographics can be introduced to STEM learning and career fields





Find Your Local Corps

Interested in joining a Corps, working for one, or volunteering?

Take a look at our list below to find out if one of the Corps in our network is near you.



Alaska	Arizona	Arkansas	California	Colorado	Connecticut	District of Columbia	Florida
Georgia	Hawaii	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky
Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina
North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	South Carolina	South Dakota	Tennessee
Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming

New York City Housing Authority

Chris Haun
Director of Energy, Finance, and
Sustainability



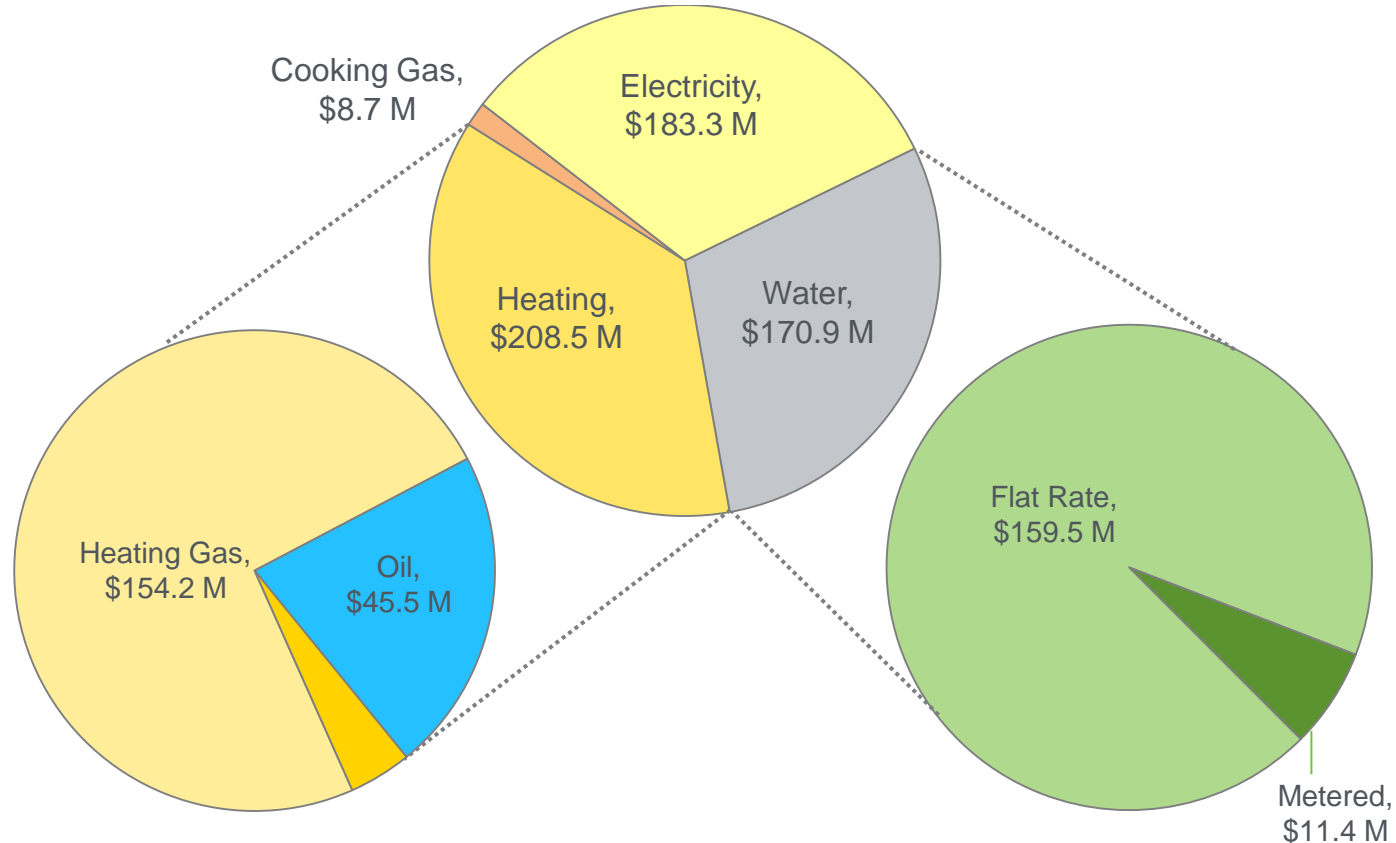


NYCHA's Utility Expenses

NYCHA's Energy Management Overview

~404,000	Residents
178,656	Dwelling Units
11,281	Utility Meters
5,939	Utility Accounts
2,354	Residential Buildings
262	Federal Housing Administration (FHAs) Buildings
125	Non-Residential Buildings
799	NYC Borough Block and Lots
643	Boiler Plants (Includes individual standalone boilers)
343	Development Responsibility Centers (RCs)
334	Developments
176	Million Square Feet
160	Unique AMPs

2013 Utility Expenses



Lisbeth Shepherd
Dennis Acevedo
Erika Symmonds



Green City Force

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FORCE

Green City Force (GCF) was founded in 2009 to address the dual imperatives of unemployment among low-income young adults and city climate action goals. GCF became a member of The Corps Network in 2010, and a State AmeriCorps program in 2012. Through our Clean Energy Corps, GCF engages young New York City public housing residents for rigorous training and service as AmeriCorps members.

GCF's innovative model has been recognized locally and nationally as a breakthrough approach to creating economic opportunity while enlisting young people to improve energy efficiency, healthy food access, and sustainability in public housing communities and beyond.



RESULTS: Recruitment from public housing developments city-wide; 80% of Corps Members graduate from program; 75% placement in work or college 12 months later.

IMPACT: Corps Members work in teams on innovative service projects. *Proven impact on reducing energy consumption in homes; launched first urban farm in public housing*

GCF catalyzes change:

GCF engages **unemployed young adults...**



- 18-24 year olds
- HS graduates or GED-holders
- Residents of public housing
- <\$2k average annual wages



...in a **comprehensive program...**



- 6 or 12 months of rigorous service pursuing city sustainability goals
- Essential skills training in teamwork and communication
- Technical certifications and academic support in math and English



...empowering them to **attend college** or **launch careers** related to the clean energy **economy.**



- Placement assistance into career track jobs, a path into the middle class
- AmeriCorps stipend and a Segal AmeriCorps Education Award.

Real World Experience, Real Impact

GREEN
CITY
FORCE

Corps Members earn a **stipend** while accruing 900 hours of **real-world experience** and making **real impact** in sustainable



Energy Services

- Reducing energy usage in public housing buildings; Opportunity = \$535M in annual utilities spending at housing authority
- Outreach to engage low-income families in energy-saving programs
- Solar panel installation and training

Transforming Urban Green Space

- Built first urban farm in public housing in NYC, inspired city to pledge 5 more;
- Generate hundreds of tons of compost per year, diverting waste from landfills
- Lead environmental education programs for students



Technical Training for Corps Members

All Corps Members receive professional development training, academic support (math and reading), and a baseline education in environmental literacy through the **ROOTS OF SUCCESS curriculum**. Additionally, all Corps Members are eligible and encouraged to take the course and corresponding exam for the **GPRO Fundamentals and Green Building Operations and Maintenance Certificate**, a national certification developed by Urban Green Council.

Corps members receive additional specialized training related to their employment and training track:

- **Basic Energy Efficiency Technician**
- **Building Performance Institute (BPI) Building Science Principles**
- **Electrical and Lighting Auditing and Retrofitting**
- **PV Solar Installation**
- **Windrow composting**



Signature Project: Changing Behaviors through a Resident-to-Resident Engagement Model

GCF Corps Members partnered with NYCHA to create the *Love Where You Live* Challenge, educating and motivating public housing residents to help **decrease energy costs** and **greenhouse gas emissions**.



Pilot Project Outcomes

- Residents from three neighboring buildings competed to save energy
- 75% average resident participation
- 11% average electricity usage reduction over three months, with the winning development saving 20%
- 154,160 kWh in estimated energy savings
- 25+ metric tons of CO₂ emissions avoided

Update: GCF and NYCHA launched our largest *Love Where You Live* Challenge to date in Red Hook East & West Houses this fall, deploying GCF's full Corps to target over 4,000 residents for energy reduction initiatives.

Green City Force

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Profile: High Return on Human



Terrell Fulwood, a resident of Bed-Stuy's infamous Marcy Projects, lacked the guidance and support necessary to successfully transition from high school to work, and found himself doing little with his life besides eating, sleeping and wasting time. That all changed when he joined GCF. Reflecting on his experience as a Corps Member, Terrell remarked, **"Green City Force was not only a way to sustain my family and me financially, but it also helped me engage my passion. I like helping others."**

Upon graduating in August 2013, Terrell secured a full-time position as a Field Technician at the Association for Energy Affordability, performing energy audits and outreach as part of Con Edison's Green Team—skills he learned during his GCF service term; he has been employed

there for more than one year.

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U.S. Department of Education
Office of Career, Technical, and Adult Education
Division of Academic and Technical Education

Career and Technical Education

Not your Parents' Vocational Education!



The Power of CTE: The Research

- Studies show reduced dropout rates compared to the general population- impact is greatest for those entering high school at greatest risk Wonacott, 2002
- Vulnerable students participating in paid CTE related internships miss few days of school Chapin Hall, 2007
- Assists in development of human, social and cultural capital by promoting knowledge of work opportunities and appropriate workplace behaviors Melendez, Harrison 1998; U.S. Department of Labor 1995; Schneider 2000
- Focus on the development of real world skills and career exploration help young people develop an understanding of the connection between the decisions they make about their education today and careers that they will be able to pursue Orfield and Paul 1994; González et al. 2003; McDonough 1997; Arbona 1994

The Benefits of CTE Programs for Special Populations

- Enhancement of students' motivation and academic achievement;
- Increased personal and social competence related to work in general;
- A broad understanding of an occupation or industry;
- Career exploration and planning; and
- Acquisition of knowledge or skills related to employment in particular occupations or more generic work competencies

Schargel and Smink (2001, p. 212)

Mitigating Risk

BARRIERS

- Poverty
- Family instability
- Family Dysfunction
- Child maltreatment
- Exposure to violence in the community
- Residential mobility/homelessness

Schools, especially those with robust CTE programs, can help mitigate these risks



PATHWAYS TO COLLEGE & CAREER READINESS

Career Clusters®



Agriculture, Food & Natural Resources



Architecture & Construction



Arts, A/V Technology & Communications



Business Management & Administration



Education & Training



Finance



Government & Public Administration



Health Science



Science, Technology, Engineering & Mathematics



Human Services



Information Technology



Law, Public Safety, Corrections & Security



Manufacturing



Marketing



Hospitality & Tourism













Transportation, Distribution & Logistics













Potential STEM Careers

STEM occupations requiring the most knowledge

<i>Occupation</i>	<i># of jobs</i>	<i>avg. wages</i>
 Biomedical Engineers	16,590	\$88,360
 Chemical Engineers	27,860	\$99,440
 Biochemists and Biophysicists	25,160	\$87,640
 Engineers, All Other	125,590	\$92,260
 Nuclear Engineers	18,430	\$105,160
 Agricultural Engineers	2,650	\$78,400
 Materials Scientists	7,900	\$86,600
 Engineering Teachers	33,660	\$97,260
 Hydrologists	6,960	\$79,070
 Materials Engineers	22,160	\$86,790

Most common STEM occupations requiring an Associate's Degree or less

<i>Occupation</i>	<i># of jobs</i>	<i>avg. wages</i>
 Registered Nurses	2,724,570	\$69,110
 Auto Techs and Mechanics	589,570	\$38,560
 Carpenters	578,910	\$44,330
 Supervisors of Prod. & Ops. Workers	559,350	\$56,890
 Electricians	512,290	\$52,910
 Computer Systems Analysts	487,740	\$82,320
 Supervisors of Mechanics, etc.	418,530	\$62,190
 Machinists	368,510	\$40,520
 Plumbers, Pipefitters, Steamfitters	349,320	\$51,830
 Welders, Cutters, Solderers, Brazers	316,290	\$37,920



Career and Technical Student Organizations



Career Exploration: My Next Move

<http://www.MyNextMove.gov>



What do you want to do for a living?



"I want to be a ..."



Search careers with key words.

Describe your dream career in a few words:

Examples: doctor, build houses

Search →

"I'll know it when I see it."



Browse careers by industry.

There are over 900 career options for you to look at. Find yours in one of these industries:

Administration & Support Services

Browse →

"I'm not really sure."



Tell us what you like to do.

Answer questions about the type of work you might enjoy. We'll suggest careers that match your interests and training.

Start →

Still not sure? Check out careers in these groups:

Bright Outlook

Skilled Apprentices

green

Job Prep



Are you a veteran looking for work?

My Next Move for Veterans helps you find a civilian career similar to your military job.

¿Haba español?

MI Próximo Paso incluye tareas, aptitudes, información sobre salarios y más de 900 carreras diferentes.



**Questions: Type in the chat box or
raise your hand.**

**We are interested in your feedback
on the Energy Is Everywhere Series!**

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