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## **CONGRESSIONAL BRIEFING** The Growing Climate Workforce: How Policies Today Could Shape the Jobs of Tomorrow

Monday, September 27, 2021

### About EESI...



### NON-PROFIT

Founded in 1984 by a bipartisan Congressional caucus as an independent (i.e., not federally-funded) non-profit organization

### 💲 🛛 NON-PARTISAN

Source of non-partisan information on environmental, energy, and climate policies

### S DIRECT ASSISTANCE

In addition to a full portfolio of federal policy work, EESI provides direct assistance to utilities to develop "on-bill financing" programs

### **SUSTAINABLE SOCIETIES**

Focused on win-win solutions to make our energy, buildings, and transportation sectors sustainable, resilient, and more equitable







### HILL BRIEFINGS

Video recordings and written summaries of Congressional briefings

### CLIMATE CHANGE SOLUTIONS

Bi-weekly newsletter with all you need to know including a legislation tracker

### SOCIAL MEDIA (@EESIONLINE)

Follow us on Twitter, Facebook, LinkedIn, Instagram, and YouTube

### FACT SHEETS

Timely, science-based coverage of climate and clean energy topics



**Strengthening America through service and conservation** 

## **The Growing Climate Workforce:** *Civilian Climate Corps*

EESI, September 27, 2021



## What is a Corps?

- Service and workforce development programs (some Corps also offer GED, high school diploma or college preparatory programs)
- Operated by nonprofits or units of state or local government
- Engage in **public-private partnerships** on **service projects** focused on stewardship, community improvement, outdoor recreation access.
- Based on model of Civilian Conservation Corps





## **The Corps Network**

- National Association of Service and Conservation Corps
- Founded in 1985
- Based in Washington, DC
- Provide technical assistance, project and grant opportunities, best practices, advocacy
- 139 member organizations across the U.S.
  - Annually engage ~20,000-25,000+ diverse young adults (typically ages 16 30)
  - Corpsmembers represent range of backgrounds and life experiences















## Having an Impact Through Public-Private Partnerships Corps Project Outcomes: 2019 - 2020 Snapshot

**1.73 million** Acres of habitat restored

**1.3 million +** Trees planted

7,300 + Miles of waterway restored

**32,000** Acres of fire fuels treated

25,300

Miles of trails constructed/improved

**20,000 +** Industry-recognized certifications earned

7,300 + Community spaces improved or constructed

500+

Wildfires and other disasters responded to

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- **Examples of Certifications/Trainings**
- Public Land Corps Authority
- OSHA 10-hr/30-hr
- Chainsaw/Sawyer Certification
- Red Card (wildland firefighting)
- HAZWOPER
- HAZMAT
- Weatherization Tech
- BPI Certified Building Analyst
- Air Sealing Certification
- Asbestos/Lead Removal
- Commercial Driver's License
- Energy Auditing Certification

- Pesticide Application
- First Aid/Wilderness First Aid
- Urban Forestry
- Home Builder's Institute
- Solar Panel Installation
- Wilderness First Responder
- CERT (Emergency Response)
- Home Energy Rater
- Insulation Tech
- Chipper
- Forklift Certification





## Wildland Fire / Natural Disasters

- Mitigation and Response <u>2019 2020</u>
  - >860 Red Cards
  - >3,300 chainsaw certifications
  - 32,000 acres of fire fuels
  - Responded to >340 fires
- Some programs focused on military veterans; engaging more women in wildfire and forestry
- Examples:
  - California Conservation Corps
  - Conservation Legacy

@TheCorpsNetwork





## **Energy Efficiency**

- Several Corps conduct energy audits; install energy and water-saving retrofits in qualifying low-income homes
- Provide education to residents
- Install solar panels
- 2019 2020 outcomes snapshot:
  - 60,700 low-income homes weatherized
- Examples:
  - Civic Works (Baltimore)
  - Sustainability Institute (Charleston)



## **Civilian Climate Corps**

- Dozen bills introduced
- Executive order, January 2021
- Surveys indicate half of all voters under the age of 45 would consider joining CCC if a position was available
- Support from:
  - <u>80+ U.S. House and Senate</u> <u>Members</u>,
  - nearly 70 US House Members,
  - and over <u>120 climate</u>, <u>environment</u>, and national service <u>organizations</u>

Sec. 215. Civilian Climate Corps. In furtherance of the policy set forth in section 214 of this order, the Secretary of the Interior, in collaboration with the Secretary of Agriculture and the heads of other relevant agencies, shall submit a strategy to the Task Force within 90 days of the date of this order for creating a Civilian Climate Corps Initiative, within existing appropriations, to mobilize the next generation of conservation and resilience workers and maximize the creation of accessible training opportunities and good jobs. The initiative shall aim to conserve and restore public lands and waters, bolster community resilience, increase reforestation, increase carbon sequestration in the agricultural sector, protect biodiversity, improve access to recreation, and address the changing climate.



## **Vision / Principles**

- Robust CCC: \$30 billion over 10 years
- Start from strength, not from scratch
- Funding for capacity building
- Funding for:
  - Project partners, Department of Labor, AmeriCorps
- Focus on equity: prioritize projects and enrollment in environmental justice communities
- **Career pathways**, adequately support for Corpsmembers
- \$15 minimum wage
- Facilitate alignment and partnerships with strategic partners





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Established in 1916, NCBA CLUSA is the oldest and largest U.S. trade association for cooperatives—representing all co-op sectors

National

Farmers

Union



### National Rural Electric Cooperative Association



Credit Union National Association



National Cooperative Bank



### Sectors

- Electric
- Agriculture
- Housing
- Retail
- Worker
- Purchasing
- Financial Services

#### Examples

- Roanoke Electric Co-op
- CHS, Organic
  Valley
- REI
  - Cooperative Home Care Assoc.
- ACE Hardware
- Credit unions

## **Cooperative Impact**

#### 1 IN 3 AMERICANS IS A MEMBER OF A CO-OP A CO-O

## Co-ops provide:

- electricity and broadband to rural communities
- credit to wage earners and working families
- processing and marketing of agricultural products
- affordable home ownership
- business ownership for low wage workers
- healthy foods to communities



### **ELECTRIC CO-OP TERRITORY**



### **HIGH POVERTY RATES**



### NCBA CLUSA



## **Rural Energy Savings Program**

- Reauthorized in the Agriculture Improvement Act (2018 Farm Bill)
- 20-year loans at zero percent interest rates
- Energy efficient improvements made on homes and small businesses
- In four years, RESP has obligated \$183.7 million through 29 direct loans



## **Build Back Better Act**

- Additional funds for loans
- Grants
  - Administration
  - Repairs •
  - Contracts •

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## **Principle 6: Cooperation among cooperatives**







Worker cooperatives

Housing cooperatives

Grocery cooperatives



## Federal Policy to Support Equitable Climate Action – Tax Incentive Reforms

Uday Varadarajan Fellow, Stanford SFI and Principal, RMI <u>uvaradarajan@rmi.org</u> September 27, 2021

## The costs of rapid climate action on energy consumers and communities is a significant equity challenge

Consumer risks are most evident in the US regulated utility sector, because costs are passed onto ratepayers

Consumers are already on the hook to pay \$25 billion per year in capital costs for \$160 billion in unabated fossil assets



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Abatement of those emissions without policy intervention will add to that cost and hurt energy communities

Asymmetric Information

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Imperfect competition throughout the economy, particularly in sectors with longlived assets, means consumers will bear the cost of climate action





## Rapid climate action requires policy focus on equity, and that means protecting energy customers and communities





Without policy intervention, climate action will be **doubly** regressive:

- Lower-income states have far more communities facing employment and economic risk from climate action
- Low-income households will further bear a disproportionate burden from decarbonization based on energy usage



Thus, the costs of climate action will fall hardest on communities with undiversified or fossil-dependent economies



Public policy must ensure that climate action protects the consumers, workers and communities that will bear the greatest risk from that action

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Public policy must ensure that climate action protects the consumers, workers and communities that will bear the greatest risk from that action

## These customer and community risks and costs are concentrated in the service territories of coal-heavy Southeastern and Midwestern utilities



RMI – Energy. Transformed.

\*Charts assess FERC Form 1 reporting utilities, which are mostly regulated IOUs.

## The ongoing health burden of fossil plant emissions falls disproportionately on vulnerable communities

Black and low-income communities bear disproportionate PM2.5 mortality risks



Household income groups in US dollars (\*1000)

Thind et al. (2019) Fine particulate air pollution from electricity generation in the US: Health impacts by race, income, and geography. *Environmental Science and Technology*, 53, 14010-14019. DOI: 10.1021/acs.est.9b02527

- Fossil fuels have direct morbidity and mortality impacts resulting in 10.2 million premature deaths per year globally (<u>Voha et. al. 2021</u>).
- Pollution burdens are borne disproportionately by vulnerable communities – BIPOC, low-income communities, newborns and the elderly.
- Many of these same communities also shoulder the financial cost of retiring polluting power plants as ratepayers, with impacts magnified through regressive electric rate structures.

# The long-run economics of reducing fossil emissions in the US electricity sector dramatically improved over the last 15 years – at least when current solar and wind federal tax credits are included



#### Figure 1: Volume-weighted average pack and cell price split



However, under current law, the (regulated, co-op, muni) utilities that own 80% of the remaining coal can only efficiently use tax credits to mitigate emissions from one or two coal plants across the country each year



\*We exclude Berkshire Hathaway Energy, which is unique among utility holding companies in having a parent company with significant federal tax liabilities to take advantage of the ITC and PTC.



And for a rapid shift to clean energy we also need emerging clean technologies – like H2, CCS, storage, offshore wind, efficiency, and nuclear – to help with grid flexibility, such as during cold winter spells



So, while climate action looks economic in the long run with current policy, nearterm energy cost burdens, extreme weather risks, and fossil community job losses are inadequately addressed

### **Existing Coal Plant**

Capacity: 1.5 GW Book life: 30 years Annual generation: 10 million MWh Annual emissions: 10 million metric ton CO2e Operating cost: \$35/MWh Recent investments: \$1.5 billion

Current customer costs: \$520 million/year Local Benefits: \$200 million/year in plant and mine wages, taxes, and royalties Non-Local Benefits: \$320 million/year in mine, rail, and plant investment returns

**Future Remediation Costs:** \$600 million in total (\$20 million/year)

#### **Replacement resource:**

- 3 GW wind and solar
- 1.5 GW 4-hour battery storage

### Replacement cost:

- \$4.5 billion

LCOE w/ ITC: \$37/MWh

### **Transition with Current Policy**

Customer cost: \$780 million/year (with \$40 million/year normalized 26% ITC), declining over time, \$260 million/year increase Local Benefits: \$40 million/year for coal ash remediation work, \$160 million/year lower Non-Local Benefits: \$780 million/year in RE wages, coal/RE returns, up \$460 million/year



Reforms proposed to the Production Tax Credit (PTC), Investment Tax Credit (ITC), and the 45Q tax credits for carbon storage – when complemented by the CEPP and DOE loans – can address many of these issues

Challenge	Policy Solution
Tax normalization limits benefits for customers of regulated utilities.	Allow PTC for Solar and Remove Tax Normalization Requirements: Exempt the ITC from tax normalization requirements and allow the PTC for solar and solar + storage as an alternative to the ITC, thereby allowing utilities more flexibility to pass these benefits through to their customers and communities.
Co-ops, munis, and regulated utilities can't use these tax credits efficiently to mitigate energy burden.	Make Energy Tax Credits Direct Pay: Make the ITC, PTC, and 45Q available to any entity regardless of tax status (including co-ops and munis, but also regulated utilities with limited tax capacities) as direct pay or via Tax Choice Bonds.
The PTC only focuses on some of the clean technologies we need	Make the PTC available to all clean generation technologies: Allow the PTC to be claimed for all generation that can reduce carbon emissions and address environmental and economic impacts on energy communities
Demand-side resources, storage, and transmission are excluded	<b>Extend the ITC to storage and transmission and add the RTC:</b> This reduces the cost of enabling grid technologies, while also making the same benefit available to technologies that reduce or shift demand

## For example, the combination of a DOE loan with direct pay of 45Q tax credits can reduce the ratepayer cost of carbon mitigation through CCS by \$1 billion, helping make it more cost-competitive



### **CLEAN ELECTRICITY PERFORMANCE PROGRAM (CEPP)**

**Economic Impact Analysis** 



## What is the Clean Electricity Performance Program (CEPP)

- The Clean Electricity Performance Program (CEPP) is a federal investment program supporting steady growth in carbon-free energy over the coming decade.
- The CEPP uses financial incentives both 'carrots' and 'sticks' – to encourage suppliers of retail electricity to increase their share of clean electricity from baseline levels by 4 percentage points (pp) each year, starting in 2023 and running through 2030.
  - Suppliers that meet or beat the 4 pp yearly increase receive a DOE grant to protect electricity customers and offset the costs of increasing clean electricity supply;
  - Suppliers that fall short must make a payment for each megawatt-hour short of the 4 pp goal.

## **CEPP Grant & Payment Formulas**

### Grants (eligible if annual increase in clean share is 4 pp\* or more):

\$150 x (annual pp increase in qualified clean electricity - 1.5%) x total retail sales

### Payments (owed if annual increase in clean share is less than 4 pp):

\$40 x (4% - annual pp increase in qualified clean electricity) x total retail sales

\* Any supplier that makes a shortfall payment in one year will have to make up that shortfall in the next year to qualify for a grant. The shortfall (in percentage points) is added to the threshold to qualify for grants in the next year.

## Some Details...

### What counts as "qualified clean electricity"?

Any source of electricity that produces less than 0.1 tons CO2-e per MWh (all renewables, nuclear, and coal or gas that capture nearly all emissions)

#### How is a supplier's baseline established?

For 2023 (the first performance year), a supplier's baseline = average clean share in 2019/2020.

#### What about suppliers that are already very clean?

Any supplier that is 85% clean or greater is exempt from any shortfall payments, provided their clean share does not decline. They can still qualify for grants.

#### Is there any flexibility?

Yes. A supplier can elect to tally up their performance over 2 or 3 year performance periods to provide flexibility to manage variations in demand, weather, maintenance outages and the "lump" nature of new clean energy additions.

### What can CEPP grants be spent on? <u>100%</u> for Customer Benefit

- The legislation specifies that the grants received <u>shall</u> be used <u>exclusively</u> for the benefit of consumers and provides a list of ways the money shall be used for customer benefits:
  - Direct bill assistance to ratepayers (reducing customer bills)
  - Investment in qualified clean electricity (building or buying)

## **Economic Benefits of CEPP**

 A recently released report by the Analysis Group estimating the potential economic impact of a CEPP that achieves 80% clean electricity by 2030 found the proposal would:

- Expand the American workforce by nearly 8 million job years in the next decade
- > Grow the economy by nearly \$1 trillion
- Increase federal, state and local revenues by \$154

## **Economic Benefits of CEPP**

- 7.7 million net new jobs across the country over 10 years:
  - 125,000 new jobs per year in the early years of the program, and by 2030 supporting 1.7 million jobs each year.
  - Includes jobs like electrical workers, solar installers, wind technicians and battery manufacturers, and all manner of construction jobs.
  - These numbers are estimates of *net* job gains over the coming decade, and factor in any changes in employment resulting from the ongoing energy transition.
  - Because the incentives are for electricity suppliers everywhere, these economic benefits would accrue to people in every state and region across the country.

## **Economic Benefits of CEPP**

- Further economic details:
  - Benefits arise from the direct investments build and operate clean/renewable resources, and from additional economic activity generated indirectly and induced by the flow of these investments throughout the economy and across the country.
  - Eligible resources would be widely built across the U.S. The deployment of readily available resources, such as solar, storage, and on-shore wind, would be accelerated, and demand for newer technologies such as offshore wind would incease.
  - Energy and economic supply chain risk would be reduced and provide an opportunity to create energy sector jobs in every region.

### **CEPP & Tax Incentives Work Together**

- Tax credits are essential to support the clean energy transition by providing large incentives to renewable energy developers, but tax credits alone do not ensure that the power sector will transition fast enough to achieve our climate goals
- The CEPP and clean energy tax incentives complement each other to achieve our climate and clean energy goals. Tax incentives reduce the cost of renewables and other clean energy generation and will work in concert with the CEPP to drive down the cost of the clean energy transition.



## What did you think of the briefing?

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