Pathways from a Low-Road, Extractive Economy to a High-Road — Sustainable and Just — Economy

ENVIRONMENT, ECONOMY, EQUITY

Emerald Cities COLLABORATIVE
America empowered.

DECARBONIZE THE BUILDING SECTOR
- Establish stronger green building codes and construction standards
- Increase energy efficiency and renewable energy in buildings
- Low- and zero-energy technologies in US buildings

DECARBONIZE THE TRANSPORTATION SECTOR
- Shift federal transportation funding from highways (81%) to mass transit.

DECARBONIZE THE FOOD SECTOR
- Invest in local food production

CLIMATE RESILIENCE AND ADAPTATION
- Community preparedness for extreme weather
- Partner with community/anchor institutions

CONSUMER ENERGY EFFICIENCY/RESOURCE CONSERVATION
awareness and practices

DECARBONIZE THE POWER SECTOR
- Divest public subsidies ($548B in 2013) and private pension investments ($5T)
- EPA Clean Power Plan and local standards to cut carbon emissions
- Invest $19.3T in renewable energy infrastructure to meet global targets

CO_2

PATHWAY TO CLEAN ENERGY

STRENGTHEN & GREEN infrastructure and built environment

INCREASE MINORITY AND WOMEN'S PARTICIPATION in jobs and contracting opportunities in clean-energy sector (16.7 jobs/ $1M invested)

LIVING-WAGE JOBS/COMMUNITY WORKFORCE agreements in clean-energy sector

PATHWAY TO ECONOMIC OPPORTUNITIES

DECENTRALIZE clean-energy assets

ELIMINATE AIR POLLUTION
- Partner with Health Institutions
- Green and Healthy Homes

INVEST IN COMMUNITY RESILIENCE
- Build community awareness of/ engagement around environmental justice

EXPAND AWARENESS ABOUT CLEAN ENERGY/CLIMATE JUSTICE
- Increase technical and STEM education and training

TAX CARBON

INCREASE clean-energy investments

PATHWAY TO SOCIAL EQUITY

INCREASE LOW-INCOME ACCESS TO:
- Energy Efficiency Weatherization Program
- Solar
- Community Solar

COMMUNITY

BUSINESS

GOVERNMENT

LABOR

COMMUNITY-BASED COALITIONS

- Carbon-free economy
- Green infrastructure/built environment
- Healthy communities
- Healthy and sustainable ecosystem
- Community resilience

ENVIRONMENT
ECONOMY
EQUITY

- High-road jobs: family-sustaining jobs with benefits, training and advancement opportunities
- Self-sufficient/self-reliant, resilient communities
- Public and community-owned energy assets
- Worker rights, including collective bargaining rights and union membership
- Use proceeds of carbon tax to invest in clean energy and counter negative impacts of fossil fuels on vulnerable communities

- Communities of color are full beneficiaries in the clean-energy/high-road economy
- Resilient and sustainable communities
- Energy resilience
- Energy democracy
- Zero net energy costs for low-income households
- Community ownership of energy assets and wealth generation

ENVIRONMENTAL IMPACT OF THE US FOSSIL FUEL ECONOMY

5% of world's population & 25% of the pollution

POLLUTION
- The U.S., with 5% of the world's population, accounts for nearly 25% of the total global carbon emissions

CLIMATE CHANGE
- Current GhG emissions will increase US temperature by **4 to 11.5 degrees by 2100, 2x as much as the last 100 years**

EXTREME WEATHER
- 253 presidential disaster declarations and increase in $1B extreme weather events over last four years

DIMINISHED BIODIVERSITY & RESOURCE DEPLETION
- With 5% of world population, we use 23% of global bio-capacity

ENVIRONMENTAL DEGRADATION

PARTICIPATION IN ENVIRO/ENERGY SECTOR
- Low level of minority participation in high-wage AEC (architecture, engineering, construction) jobs

JOB QUALITY/JOB ACCESS/JOB CREATION
- Greater morbidity/mortality in extraction industries.
- Fossil fuel sector creates only 5.3 jobs per $1M invested, vs. 16.7 in clean energy sector
- Only 2.2 fossil fuel jobs per $1M invested are open to those with high school diploma or less vs. 8 in clean energy

ECONOMIC/PROPERTY LOSS
- 42 extreme weather events exceeding $1B in the past four years; total of $227B in economic losses, and 1,286 fatalities

WALL ST

INCOME/WEALTH DISPARITIES
- Concentrated wealth — Top 5 oil companies made $93B in profits in 2013
- CEOs of top 5 oil companies were paid $96M in 2013, 400x US median family income
- 40% of oil profits were used to repurchase stock, increasing wealth of large shareholders, senior execs, board members

$360B-$1T EACH YEAR

TAX/EXPENSE BURDEN OF FOSSIL FUEL INDUSTRY
- US taxpayers pay an estimated $360B-$1T each year related to the military, climate, local environmental and health impacts of the fossil fuel industry
- Fossil fuels generally cost more ($0.07-$0.14/kWh) than renewables ($0.05-$0.20/kWh)
- Rising food costs due to climate change-induced droughts

EXTRACTIVE ECONOMY

CLIMATE INEQUITIES
- Low-income communities most vulnerable to climate change

HEALTH INEQUITIES
- Communities of color breathe nearly 40% more polluted air than whites and live in counties with high levels of pollution
- Asthma & other health problems are common

ENERGY INEQUITIES
- Low-income families use 20% less energy than non-poor families but pay 13% more of income on home energy costs (17% vs. 4%)

SOCIAL INEQUALITY

START

September 2015

For more information, please see the back page.

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ENVIRONMENT, ECONOMY, EQUITY

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ENVIRONMENT

ENVIRONMENTAL DEGRADATION	PATHWAY TO CLEAN ENERGY	HIGH-ROAD, SUSTAINABLE, JUST ECONOMY
Environmental impact of the U.S. fossil fuel economy **Pollution** • The U.S., with 5% of the world's population, accounts for nearly 25% of global carbon emissions.	**Decarbonize the power sector** • Divest public subsidies ($548B in 2013) and private pension investments ($5T). • EPA Clean Power Plan and local standards to cut carbon emissions. • Invest $19.3T in renewable energy infrastructure to meet global targets.	Carbon-free economy. Healthy and sustainable ecosystem. Green infrastructure/ built environment.
Environmental degradation • Greenhouse Gas (GhG) emissions increase localized health-damaging pollutants, including sulfur dioxide, nitrogen oxides and particulate matters + 20 toxic chemicals. • Areas of the southern and south-western U.S. are projected to go from an average of 60 days a year above 90 degrees to 150 days by 2099. • Extreme weather events, including heat waves, droughts and floods, have become more frequent and intense. More than 25,000 new record highs were set in 2012 alone across the U.S.	**Decarbonize the building sector** • Install low- and zero-carbon technologies to zero net energy standards in 5.6M commercial buildings, 124K schools and 128M residential buildings to eliminate 39% of U.S. carbon emissions. • Establish stronger green building codes and construction standards. • Increase energy efficiency and renewable energy in buildings. • Low- and zero-energy technologies in U.S. buildings. • Triple global low-carbon technology investments from $255B in 2014 to $730B in 2035, three-quarters for renewables.	
	Decarbonize the transportation sector • Shift federal transportation funding from highways (81%) to mass transit.	
	Decarbonize the food sector • Invest in local food production.	
Climate Change • By 2100, the average U.S. temperature is projected to increase by about 4°F - 11°F, depending on the level of future GhG emissions. By 2100, the global average temperature is expected to warm at least twice as much as it has during the last 100 years.		
Extreme Weather • 253 presidential disaster declarations and increase in $1B extreme weather events over last four years.	**Climate resilience and adaptation** • Community preparedness for extreme weather. • Partner with community/anchor institutions.	Resilient and sustainable communities.
Diminished Biodiversity & Resource Depletion • It would take 5x the Earth's natural resources if everyone in the world lived like we do in the U.S. With 5% of world population, we use 23% of global bio-capacity.	**Expand consumer energy efficiency/resource conservation awareness and practices**	Sustainable communities.

ECONOMY

EXTRACTIVE ECONOMY	PATHWAY TO ECONOMIC OPPORTUNITIES	HIGH-ROAD, SUSTAINABLE, JUST ECONOMY
Tax/expense burden of fossil fuel industry • U.S. taxpayers pay an estimated $360B-$1T each year related to the military, climate, local environmental and health impacts. • A 2009 report by the National Academy of Sciences claims that burning fossil fuels results in about $120B per year in health-related costs. • Fossil fuels generally cost more ($.07-$.14kWh) than renewables ($.05-$.20 kWh). • Rising food costs due to climate change-induced droughts.	• Tax carbon. • Increase affordable, clean-energy investments.	Use proceeds of carbon tax to invest in clean energy and counter negative impacts of fossil fuels on vulnerable communities.
Income/wealth disparities • Concentrated wealth – Top 5 oil companies made $93B in profits in 2013. • CEOs of top 5 oil companies were paid $96M in 2013, 400x U.S. median family income. • 40% of oil profits were used to repurchase stock, increasing wealth of large shareholders, senior execs, board members. • In 2015, the top 5 oil companies rejected increasing worker pay by 6.5% over three years, citing lower profits. • In March 2015, BP's CEO received a 25% raise and $9.8M in stock and froze the pay of 84,000 global workers while profits fell by $1.3B (to $12.1B).	• Decentralize clean-energy assets. • Establish renewable energy producer and consumer coops.	Public and community-owned energy assets.
Economic/property loss • 42 extreme weather events exceeding $1B in the past four years for total of $227B in economic losses in 44 states, as well as 1,286 fatalities. • Since 1990, total government exposure to losses in hurricane-exposed states has risen more than 15-fold to $885B in 2014.	**Strengthen & green infrastructure & built environment** • Create national and state infrastructure investment/banks. • Increase local/community resilience capacities, including social, physical and economic infrastructure of vulnerable communities.	Urban and community resilience.
Job quality/job access/job creation • Greater morbidity/mortality in extraction industries. • Fossil fuel sector creates 5.3 jobs/$1M invested, only 2.2 for high school diploma or less. • The clean, low-carbon economy offers more opportunities and 13% higher median pay for low- and middle-skilled workers than the national economy as a whole. • From 2003 to 2010, 823 oil and gas extraction workers were killed on the job – a fatality rate seven times greater than the rate for all U.S. industries. Blacks make up about 13% of the U.S. population but represent about 8% of employees in the oil, gas and petrochemical sectors – and just 6% of management, business and financial jobs.	**Increase minority and women's participation in jobs and contracting opportunities in clean-energy sector; replace fossil-fuel jobs with green/clean-energy jobs** • Increase participation of communities of color in environmental leadership. • Increase minority and women's participation in construction unions via community workforce agreements. • Increase minority access to climate, community and environmental planning. • 16.7 clean-energy jobs /$1M invested (a 3-fold increase over fossil-fuel jobs), with eight of those available to workers with a high school diploma or less. • Living-wage jobs/community workforce agreements in clean-energy sector.	Worker rights, including collective bargaining rights and union membership. High-road jobs: family-sustaining jobs with benefits, training and advancement opportunities. A disproportionate percentage of moderately well-paying "green collar" jobs in the clean-energy economy are staffed by workers with relatively little formal education.

EQUITY

SOCIAL INEQUALITY	PATHWAY TO SOCIAL EQUITY	HIGH-ROAD, SUSTAINABLE, JUST ECONOMY
Energy inequities • Low-income families use 20% less energy than non-poor families, but pay 13% more of income on home energy costs (17% vs. 4%). • Households with income of more than $76,000 emit four times more than those making less than $10,000.	Increase funding for weatherization assistance. Increase investments in low-income home energy assistance program. Increase low-income solar assistance funding. Increase community solar. Expand community-owned energy.	Energy resilience. Energy democracy. Zero net energy costs for low-income households. Community ownership of energy assets and wealth generation.
Health inequities • Communities of color experience high levels of pollutants, including 38% higher levels of nitrogen oxides, sulphur dioxide, particulate matter, etc. • Asthma and other health problems are more prevalent among persons below poverty level. • Health problems such as high blood pressure, diabetes and chronic heart disease increase the vulnerability of low-income families to heat waves and urban heat islands. • Communities of color breathe nearly 40% more polluted air than whites and live in counties with high levels of pollution.	Eliminate carbons and particulate matter to improve environmental health. Partner with health Institutions to invest in community/environmental health. Green and healthy homes. EPA's Clean Power Plan, which restricts polluting emissions from exiting power plants, could avoid an average of 3,500 deaths a year from respiratory and other illnesses.	Healthy communities.
Climate inequities • Low-income communities are the most vulnerable to climate change. • A June 2014 White House report, "The Health Impacts of Climate Change on Americans," states: Heat waves and other extreme weather events can disproportionately affect low-income communities and some communities of color, raising environmental justice concerns.	Community-driven resilience (social, physical and economic) investments.	Resilient and sustainable communities
Participation in enviro/energy sector • People of color have not broken the 16% "green ceiling" at nearly 300 environmental organizations surveyed by Green 2.0. • Low level of minority participation in high wage AEC (architecture, engineering, construction) jobs. • An estimated 60% of energy-sector job growth will occur in skilled and technical jobs requiring up to two years post-high school training.	**Expand outreach to and career awareness/participation of minority communities about clean energy/ climate justice.** • Increase technical and STEM preparation and training. • Increase inclusion of people of color in environmental organizations' leadership and staff. • Increase participation by women and people of color in construction labor unions via community workforce agreements. • Increase access to contracting/ business opportunities in the clean-energy economy for communities of color. • Increase participation by communities of color in climate, community and environmental planning.	**Communities of color are full beneficiaries in the clean-energy/ high-road economy** • Representative participation of communities of color in all climate/ environmental/ energy sectors and planning processes.