

Equity Considerations for En-ROADS

Energy Supply		Transport		Land and Industry Emissions	
<p>Coal Taxing can raise energy costs. Low-income individuals who rely on coal jobs suffer the most negative impacts of its production. </p>	<p>Renewables Subsidy programs are often limited to homeowners, while poorer communities are unable to access the technology. </p>	<p>Energy Efficiency High-quality pedestrian & cycling infrastructure is often concentrated in wealthier, white communities. Improved public transportation can improve social equity. </p>	<p>Electrification Electric vehicles and charging stations may not be affordable or available to everyone. Mining battery materials like lithium and copper harms ecosystems. </p>	<p>Deforestation Policies to reduce deforestation need local stakeholder engagement. Some preservation efforts have restricted the access of Indigenous people who have lived sustainably on the land for generations. </p>	<p>Methane & Other Policies to reduce methane & other gases may decrease food security. Cultural values are attached to many foods. Local economies and employment that rely on industrial agriculture can be threatened. </p>
<p>Oil Taxing can burden people who rely on oil for heating or transportation. Workers may need re-training </p>	<p>Nuclear Plants, mines, & waste sites often located in low-income areas that lack resources to advocate for stricter regulations. </p>	<p>Buildings & Industry</p>		<p>Carbon Removal</p>	
<p>Natural Gas Poor communities & communities of color disproportionately experience negative impacts of drilling and burning. </p>	<p>New Technology There are unknown consequences and risks associated with new energy sources. </p>	<p>Energy Efficiency Sometimes high up-front costs of efficiency improvements. Policies often directed to property owners, inhibiting low-income renters from accessing the benefits. </p>	<p>Electrification Sometimes high up-front costs of switching energy systems to electric. Household air pollution is unevenly distributed within and across countries </p>	<p>Afforestation Large shifts in land can compromise historic land access or compete with other needs for the same land, including food production. </p>	<p>Technological Many approaches have not yet been developed at scale and growing technological removal poses unknown risks and consequences to the communities they are situated within. </p>
<p>Growth</p>		<p>Population Policies around limiting population growth should be voluntary, accessible, & empower women to make the choices that are best for them. </p>	<p>Economic Growth Gains in GDP have disproportionately gone to the world's wealthiest in recent decades. Policies must be tailored to an area's specific circumstances. </p>		
<p>Bioenergy Subsidizing may accelerate deforestation and can negatively impact farmer livelihoods by shifting agriculture markets. </p>	<p>Carbon Price Higher costs may be passed on to consumers. Corruption may lead to governments or companies taking advantage of revenues. </p>				

Multisolving co-benefits for En-ROADS

Energy Supply		Transport		Land and Industry Emissions	
Coal Taxing coal can reduce air pollution, which can improve community & ecosystem health. 	Renewables  Subsidizing can reduce air & water pollution, improve health, productivity, savings, energy access, and job opportunities.	Energy Efficiency Increasing can lower total energy costs, improve public transit & reduce traffic congestion. More biking & walking increases physical activity and health. 	Electrification Increasing creates jobs in manufacturing & sales of electric batteries & engines. Improves air quality at the source, which can increase health & worker productivity. 	Deforestation Reducing can decrease erosion, help protect biodiversity, ecosystems, & food sources. Also can preserve small-scale resource gathering & sustainable forestry livelihoods. 	Methane & Other Reducing can improve water pollution & protect habitats. Plant-based diets are typically healthier for individuals and ecosystems. 
Oil Taxing reduces chance of harmful oil spills. Less oil demand can improve national security & lower military costs. 	Nuclear Taxing can reduce the risk of exposure to radiation from nuclear meltdown or hazardous waste. Protects health of uranium miners. 	Buildings & Industry		Carbon Removal	
Natural Gas Taxing can improve water security & quality, protects wildlife and biodiversity. 	New Technology Research advancements in new technologies can create jobs and may be useful for other applications. 	Energy Efficiency Increasing can reduce total energy costs, improve indoor air quality, & health, and create jobs. 	Electrification Increasing creates jobs, can lower energy costs, & improve indoor & outdoor air quality. 	Afforestation Increasing creates jobs in tree planting & care. Urban tree canopies reduce urban heat island effect which conserves energy. 	Technological Growth in nature-based carbon removal approaches like agricultural soil sequestration may help improve small-holder and farmer profits. 
Bioenergy Taxing can free up land for other uses like food production and protect intact ecosystems. 	Carbon Price Can improve air quality, healthcare savings, & worker productivity. Makes renewable energy relatively cheaper. Funds can be earmarked for social programs. 	Population Lower growth can reduce global consumption. Access to family planning, reproductive services, & education enhances quality of life for women. 	Economic Growth Low growth can shift focus from material consumption to alternative measures of wellbeing such as gross national happiness. 		