ENERGY INNOVATION
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How Federal Clean Energy Tax Credits Benefit Michigan

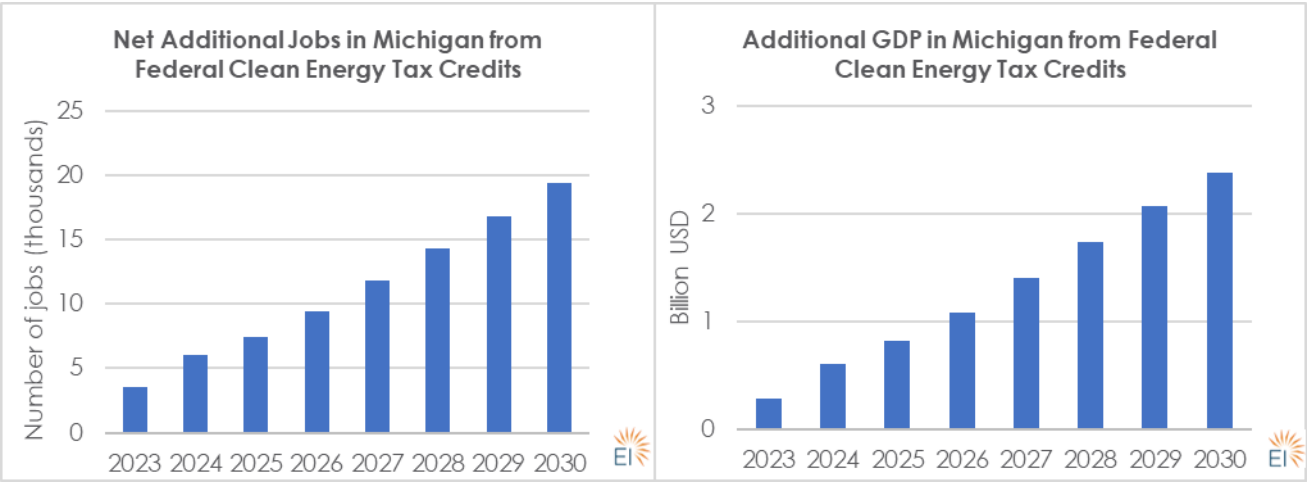
Federal clean energy tax credits in the Inflation Reduction Act (IRA) are transforming the United States economy, already generating nearly $250 billion in project announcements that could create more than 140,000 new jobs. Prior modeling by Energy Innovation Policy & Technology LLC® showed IRA tax credits are projected to unleash billions in investment by 2030, increasing GDP up to $200 billion and creating up to 1.3 million jobs nationally.

Energy Innovation® used our free and open-source Energy Policy Simulator to study potential state-level benefits on economic growth, jobs, and public health in Michigan from the IRA. We focus this analysis on clean electricity and clean vehicle tax credits, given the outsized impact of these tax credits on jobs and the economy.

This modeling finds these federal clean energy tax credits are projected to lower annual energy costs nearly $90 per household for Michigan residents in 2030, prevent more than 550 early deaths from pollution through 2050, and cumulatively prevent more than 400 million metric tons of carbon dioxide through 2050 compared to the base case – equivalent to the emissions from 108 coal-fired power plants in one year.

Federal Clean Energy Tax Credits Add to GDP and Cut Household Energy Spending

Federal clean energy tax credits will increase clean energy deployment and electric vehicles sales in Michigan. These investments and their impacts are projected to increase Michigan's GDP by $2.3 billion in 2030. Higher clean energy deployment and decreased spending on gasoline are projected to reduce average annual household energy spending by $90 per year in 2030 and a cumulative $8.7 billion through 2050 across all households in Michigan. Because more clean energy will be deployed with federal clean energy tax credits, Michigan is projected to gain more than 19,000 jobs in industries like manufacturing, construction, and sales in 2030.



Federal Clean Energy Tax Credits Are an Investment in Cleaner, Healthier Communities

IRA programs are expected to shift the U.S. energy system, replacing fuel combustion with clean energy. This transition will dramatically reduce greenhouse gas emissions along with harmful air pollution that causes asthma, respiratory illness, and premature death. Federal clean energy tax credits are projected to prevent 550 premature deaths and 180 asthma attacks in Michigan through 2050. The shift to clean energy is expected to have a particularly positive impact on the health of communities of color and low-income communities, which are disproportionately affected by vehicle and power plant pollution. Pollution reductions in neighboring states would avoid additional premature deaths and health impacts as well.

Avoided Health Impacts	in 2030	through 2050
Premature Mortality	15	555
Asthma Attacks	190	7,183
Nonfatal Heart Attacks	4	170
Hospital Admissions	3	117

Methodology

We identify incremental state clean electricity deployment by comparing two scenarios from modeling by the National Renewable Energy Lab: the *Mid-case, nascent techs, current policies scenario* and the *No IRA, nascent techs, current policies scenario*. Comparing these two scenarios reveals the incremental clean electricity deployment from the IRA. We used the incremental clean electricity deployment to develop an IRA policy scenario for each state in the Energy Innovation® Energy Policy Simulator. We estimated clean vehicle tax credit impacts using a a complementary model we developed. We combined the clean vehicle tax credits and clean electricity deployment to create an IRA scenario for Michigan and compared it against a case without the IRA to find outputs for changes in emissions, health impacts, statewide household savings, GDP, and jobs.