

- DDPP was created to develop national plans for cutting carbon emissions by 80% from 1990 levels by 2050, which is necessary for the planet to not exceed 2°C in global warming.
- USDDPP is the U.S. research team tasked with analysing the U.S. energy system. In this capacity, USDDPP has issued two national decarbonization reports, and it has developed sophisticated energy system modelling software to support its reports and analysis. The first report is a technical assessment of the U.S. energy system and economy that demonstrates that the 80% by 2050 target is both technically viable and affordable, costing roughly 1% of GDP. The technical assessment outlines four decarbonization “pathways”, including high renewable, high CCS, high nuclear and a mix. The second report offers policy recommendations for how the U.S. can best implement the transformation outlined in the first report.
- USDDPP data, analysis and software tools are currently being used by decarbonization initiative in three states, California, Washington and New York. The organization is in discussions to provide data and analysis to agencies, regulators and other energy system stakeholders in other geographies across the United States, and USDDPP software is being used by a range of analysts and researchers at government agencies, national laboratories, NGOs and businesses.
- USDDPP is the creator of EnergyPATHWAYS, an open-source long-term energy and carbon planning model that tracks energy use, emissions and energy costs across the commercial, industrial, residential and transportation sectors. The model tracks all equipment that produces, transmits and consumes energy, from electricity generation plants and transmission equipment to cars, airplanes, factories, and lightbulbs.
- The EnergyPATHWAYS model is open-source and freely available in two formats. A native application that can be installed on local servers, designed to be used by researchers and developers, and a web-based application that enables analysts and energy planners to agencies, NGOs, business, energy companies and in government to easily run “what if” scenarios using a standard web browser.
- EnergyPATHWAYS balances energy production and demand on an hourly basis, ensuring that variable renewable energy production is balanced with end-user demand, and that the cost of energy balancing is accurately accounted for.
- USDDPP modelling does not allow for “energy miracles” or any non market-ready technologies, such as grid scale batteries, 4th generation nuclear power, fusion nuclear power, high efficiency coal and gas plant CCS, negative carbon atmospheric CCS, or unexpected breakthroughs in synthetic fuels or bio fuels. There are no “blue sky” technology assumptions the would put the validity of the results in question.
- Each Deep Decarbonization pathway is based on three pillars: a 70% decrease in energy intensive of economic activity through improved efficiency, an increase in end-use electricity and electrically manufactured fuel from 20% to 50% of all energy, and a reduction in the carbon intensity of electricity by 97%.