Clean Energy and Climate Policies Lead to Economic Growth in Virginia:

New analysis shows that adopting comprehensive clean energy and climate legislation could create up to 50 thousand jobs in Virginia

New economic analysis shows that comprehensive clean energy and climate policies would create jobs, increase consumers' income, and strengthen the U.S. economy as a whole. Based on collaborative research by the University of California, University of Illinois, and Yale University, the analysis clearly demonstrates that comprehensive clean energy and climate protection legislation, like the American Clean Energy and Security Act and the Clean Energy Jobs and American Power Act, would create incentives that stimulate economic growth through large-scale investments in clean energy and energy efficiency.

Between 2010 and 2020, these investments would:

- On a national level, create between 918 thousand (moderate efficiency case) and 1.9 million (high efficiency case) new jobs, increase annual household income by $487 to $1,175 per year, and boost GDP by $39 billion to $111 billion – with all of those benefits measured relative to a scenario without such legislation.
- Create between 25 thousand and 50 thousand jobs in Virginia - on top of a baseline increase of 625 thousand jobs over the same timeframe.[1]
- Increase Virginia's real Gross Domestic Product by $1.3 billion to $3.2 billion more than without legislation (2008$). That is a 0.3% to 0.7% increase on top of baseline growth of 28.9%.[2]
- Lead to average real household income in Virginia that is $554 to $1,325 higher per year than without the legislation (2008 dollars).[3]

These economic gains are over and above growth that Virginia would see in the absence of such a bill.

Table 1: Virginia Macroeconomic Impacts by 2020

	2010-2020 Baseline Growth	2010-2020 Growth With ACES	Net Increase Due to ACES	Percent Change Due to ACES
Employment (Thousands)	**625**	**649-675**	**25-50**	**0.4-0.9**
GDP (2008$ Billions)	**100**	**101-103**	**1.3-3.2**	**0.3-0.7**

The new comprehensive economic assessment was conducted by a team of researchers at the University of California using EAGLE, a new state-of-the-art forecasting model, to study the detailed economic impacts of the legislation on the U.S. and each of the 50 states.

[1] Employment is measured as average full-time equivalent (FTE) labor force participation per year. This means a single full-time job or two half-time jobs (people) are both counted as one FTE job.
[2] Real GDP measures inflation-adjusted value-added in the private sector, i.e. net income to workers, enterprises, and equity investors, and is the most popular measure of economic activity.
[3] Household income measures wage and dividend income per household in 2008 dollars.

Results from EAGLE are also consistent with modeling by U.S. government agencies – such as the Environmental Protection Agency, Congressional Budget Office, and the Department of Energy – all showing substantial economic benefits from the more efficient use of energy as part of comprehensive energy and climate legislation.

By reducing our dependence on imported energy, legislation like the American Clean Energy and Security Act and the Clean Energy Jobs and American Power Act will free us to commit more of our resources to domestic job creation, and reduce our vulnerability to volatile oil prices, climate damage, and other threats to our national security. Moving from dirty to clean energy sources will unleash a wave of more efficient technologies and drive innovation and new industry formation.

The cost reductions driven by climate legislation will boost our economy. The reason is simple: energy efficiency reduces import dependence and the costs for transportation, heating, electricity, etc., saving households and businesses money -- money they can spend on domestic goods and services, which will create jobs for Americans. For example, over the last thirty years, California reduced its per capita electricity consumption to 40% below the national average. This saved households $56 billion, and those savings created 1.5 million additional jobs in California with $45 billion in additional wages and salaries.

The EAGLE modeling effort examined two scenarios: a moderate-efficiency case and a high-efficiency case. The moderate-efficiency case reflects faithful, but not aggressive, implementation of energy efficiency standards and incentives in clean energy and climate legislation, and assumes moderate rates of innovation in response to these policies. The high-efficiency case indicates the potential for greater economic gains from more aggressive implementation of the efficiency provisions at the federal level, and adoption of supportive policies by most states. The rate of energy productivity improvements in the high-efficiency case are consistent with results that have been achieved by states that historically have had the most successful energy efficiency policies.[4] A recent McKinsey & Company study on energy efficiency potential in the U.S. found that there are enough cost-efficient energy efficiency opportunities to achieve these levels of efficiency improvement by 2020, all at positive individual returns.[5]

The results are clear: We can improve our economy and the environment at the same time. A new energy economy will be less polluting, more efficient, more competitive, and provide more jobs. The United States and Virginia can enjoy a cleaner, more prosperous future by passing comprehensive clean energy, energy security, and climate legislation.

Methodology

The Environmental Assessment in GeneraL Equilibrium (EAGLE) model was developed at the University of California (Berkeley). It details patterns of supply, demand, employment, incomes, resource allocation, energy use, and emissions across the nation and within each of the 50 United States. Using a general equilibrium framework, the model captures both direct impacts and the extensive economy-wide indirect effects of climate and energy policies. The EAGLE model has been peer reviewed and technical documentation is available on request.

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[4] For example, California achieved an aggregate increase in energy efficiency averaging 1.4% per year from 1972 to 2002. The high-efficiency case assumes that energy efficiency improves at a rate of 1.5% per year, compared to 0.75% per year in the moderate-efficiency case.

[5] McKinsey & Company, "Unlocking Energy Efficiency Potential in the U.S.", http://www.mckinsey.com/clientservice/electricpowernaturalgas/US_energy_efficiency/