

# Job Creation Estimates for North Carolina through U.S. THRIVE Agenda

## *Program to Transform, Heal, and Renew by Investing in a Vibrant Economy—THRIVE*

This report presents estimates of the job creation that would result in North Carolina if the U.S. Congress passes economic recovery legislation that implements a national THRIVE investment agenda, as described in a September 2020 Congressional resolution.<sup>1</sup> The overall finding we report here is that implementing the 10-year THRIVE investment agenda in North Carolina would generate about 305,000 jobs in the first full year of the program. This higher level of employment in North Carolina would be sustained throughout the 10 years of the investment program (assuming no other major changes in North Carolina's economy were to occur).<sup>2</sup> Thus, if the THRIVE program were implemented in full in 2021, employment in North Carolina would increase by 305,000 jobs and that higher level of employment would continue in the state as the 10-year program continues until 2030.

The Congressional resolution's commitment is to "Transform, Heal and Renew by Investing in a Vibrant Economy"—i.e. "THRIVE"—through a range of investments to rebuild the U.S. economy. To date, the THRIVE Agenda has been endorsed by more than 100 members of Congress, including Senate Majority Leader Chuck Schumer, and hundreds of major union, racial justice, and climate organizations.<sup>3</sup> The aims of the THRIVE Agenda are similar to those proposed in the Build Back Better program advanced by President Biden during his 2020 presidential campaign.

**Robert Pollin**

**Jeannette Wicks-Lim**

**Shouvik Chakraborty**

**Gregor Semieniuk**

**Chirag Lala**

1 <https://www.congress.gov/bill/116th-congress/house-resolution/1102/text>

2 Of course, other changes in North Carolina's economy will occur over the 10-year period 2021 – 2030, often in ways that cannot be predicted in advance. Still, our estimate of a 305,000 increase in employment under an "all else equal" assumption provides a benchmark for measuring the extent to which the THRIVE Agenda will expand job opportunities in the state, even after we allow that, in reality, economic conditions will undergo changes between 2021- 2030.

3 <https://www.thriveagenda.com>

The THRIVE Agenda consists of four major investment areas:

**1. Clean renewable energy and energy efficiency:** To expand access to renewable energy and improve the energy efficiency of vehicles, buildings, and industries so as to achieve the climate stabilization goals set out by the Intergovernmental Panel on Climate Change (IPCC) of reducing carbon dioxide emissions by 45 percent by 2030 and to reach net zero emissions by 2050.

**2. Infrastructure:** To expand access to affordable transportation, high-speed broadband, clean water, upgrade parks and other public amenities, reduce pollution, and strengthen the public resources needed to undergird a manufacturing revival.

**3. Agriculture and land restoration:** To expand opportunities for family farmers, including younger farmers and people of color, and to support regenerative agriculture, local and regional food systems, and climate resilience.

**4. Care economy, public health, and the postal system:** To significantly expand and enhance the level of service provision in these crucial areas of the economy and to raise job quality standards—including wages, benefits, and workplace conditions—for workers employed in these activities.

For the U.S. as a whole, the THRIVE Agenda is designed as a 10-year investment program, with an average annual budget of \$954 billion.<sup>4</sup> This would amount to about 4.0 percent of average U.S. Gross Domestic Product over 2021 – 2030, assuming that the U.S. economy grows at about 2.2 percent per year.

Our job creation estimates for North Carolina result from the state receiving its share of the overall THRIVE budget based on its share of the U.S. population. Because North Carolina accounts for 3.2 percent of the U.S. population, its share of the \$954.2 billion annual U.S. THRIVE budget would be \$30.6 billion per year (with rounding). The proportions of total THRIVE spending in North Carolina will also be equal to their respective shares for the overall U.S. economy. In Table 1, we show North Carolina’s annual budget allocations by investment area under THRIVE between 2021 – 2030. They amount to: \$11.6 billion for clean renewable energy and energy efficiency; \$10.3 billion for infrastructure; \$6.0 billion for agriculture and land restoration; and \$2.7 billion for the care economy, public health and postal service.

As we noted above and present in detail in the following tables, this level of investment spending in North Carolina will generate an average of about 305,000 jobs within the state. This is equal to 5.4 percent of North Carolina’s labor force as of February 2020. To illustrate the potential impact of this level of job creation in North Carolina, let us assume that these investments are undertaken in the state, and all else about the state’s economy were to

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<sup>4</sup> In our March 2021 report *Employment Impacts of Proposed U.S. Economic Stimulus Programs: Job Creation, Job Quality, and Demographic Distribution Measures*, we describe the components of the overall U.S. THRIVE Agenda and the sources for the budget figures in the program’s various investment areas. We also present details on our methodology for estimating job creation figures and related data presented for the national THRIVE program: <https://www.peri.umass.edu/publication/item/1397-employment-impacts-of-proposed-u-s-economic-stimulus-programs>.

**TABLE 1: U.S. THRIVE Agenda Budget and North Carolina Budget Allocations through THRIVE**  
*North Carolina population = 3.2% of U.S. population*

	Overall U.S. THRIVE Agenda Budget		North Carolina THRIVE Agenda Budget Allocations
	U.S. THRIVE Agenda Budget Allocations	Shares of U.S. THRIVE Agenda Budget Allocations	
Clean renewable energy and energy efficiency	\$358.8 billion	37.6%	\$11.6 billion
Infrastructure	\$324.3 billion	34.0%	\$10.3 billion
Agriculture and land restoration	\$186.6 billion	19.5%	\$6.0 billion
Care economy, public health, and postal service	\$84.5 billion	8.9%	\$2.7 billion
<b>Totals</b>	<b>\$954.2 billion</b>	<b>100%</b>	<b>\$30.6 billion</b>

Source: <https://www.peri.umass.edu/publication/item/1397-employment-impacts-of-proposed-u-s-economic-stimulus-programs>.

remain equal. Under such an “all else equal” assumption, this level of job creation would result, for example, in the state’s unemployment rate falling to 1.4 percent from its average level of 6.8 percent between July – December 2020. A reduction in North Carolina’s unemployment rate at something approximate to this scale would represent a major expansion in job opportunities throughout the state. Indeed, implementing the THRIVE Agenda in North Carolina would likely encourage a large number of people to enter North Carolina’s labor force, or to reenter after having dropped out because their prospects for getting hired had been discouraging. Overall, the rise in the state’s employment opportunities will provide a foundation for a broader improvement in living conditions for the people of North Carolina.<sup>5</sup>

Of course, this expansion in job opportunities would be in addition to the benefits to the people of North Carolina through implementing the THRIVE investment program—i.e. the benefits resulting from building a clean energy system throughout the state; deepening the state’s commitment to protecting its environment; enhancing productivity and business opportunities through upgrading the state’s infrastructure; widening opportunities in agriculture and land restoration; and raising quality standards in the provision of care economy, health care and postal delivery services.

<sup>5</sup> In *Employment Impacts of Proposed U.S. Economic Stimulus Programs*, as cited above, we provide evidence on job creation at the national level within five major sectors of the U.S. economy: manufacturing; services; construction; wholesale and retail trade; and agriculture. For example, we report that manufacturing employment through the national THRIVE program will amount to 1.6 million jobs, equal to 10.3 percent of the 15.5 million overall level of job creation. This study of the U.S. economy-wide impact of the THRIVE Agenda also includes data on 1) wages, benefits and unionization rates for workers currently employed in the range of activities associated with the THRIVE Agenda; 2) educational attainment levels of these workers; and 3) shares of women and people of color employed in these activities at present.

## NORTH CAROLINA Energy Efficiency and Clean Renewable Energy Investments through THRIVE Agenda

**TABLE 2A: Energy Efficiency and Clean Renewable Energy Investments: Job Creation—Direct, Indirect, and Induced Jobs**

	Job Creation per \$1 Million in Spending			
	1) Direct Jobs	2) Indirect Jobs	3) Induced Jobs	4) Total Jobs
<b>Energy efficiency</b>				
Building retrofits	5.1	3.1	2.5	10.7
Industrial efficiency	3.0	1.2	1.6	5.8
High-efficiency autos	0.3	0.2	0.2	0.7
<b>Renewable energy</b>				
Wind energy	2.0	0.9	1.0	3.9
Solar energy	2.5	1.2	1.3	5.0
Geothermal energy	5.6	1.9	2.6	10.1

**TABLE 2B: Energy Efficiency and Clean Renewable Energy Investments: Total Jobs Created with Budgetary Figures**

	1) Total Jobs/ \$1 Million	Annual Job Creation		Job-Years Created, All Years		
		Annual Budget	Job Creation per Year	# of Years	Total Budget	Total Job Years
<b>Energy efficiency</b>						
Building retrofits	10.7	\$1.8 billion	19,300	10	\$18.0 billion	193,000
Industrial efficiency	5.8	\$202.7 million	1,200	10	\$2.0 billion	12,000
High-efficiency autos	0.7	\$1.8 billion	1,300	10	\$18.0 billion	13,000
<b>Renewable energy</b>						
Wind energy	3.9	\$3.5 billion	13,600	10	\$35.0 billion	136,000
Solar energy	5.0	\$3.5 billion	17,500	10	\$35.0 billion	175,000
Geothermal energy	10.1	\$772.2 million	7,800	10	\$7.7 billion	78,000
<b>Total</b>		<b>\$11.6 billion</b>	<b>60,700</b>	<b>10</b>	<b>\$116.0 billion</b>	<b>607,000</b>

## NORTH CAROLINA Infrastructure Investments through THRIVE Agenda

**TABLE 3A: Infrastructure Investments: Job Creation—Direct, Indirect, and Induced Jobs**

	Job Creation per \$1 Million in Spending			
	1) Direct Jobs	2) Indirect Jobs	3) Induced Jobs	4) Total Jobs
Surface transportation	9.3	1.6	2.1	13.0
Water/wastewater	5.5	1.9	2.3	9.7
Electricity	2.1	0.8	1.0	3.9
Airports	3.1	1.1	1.5	5.7
Inland waterways/marine ports	2.8	1.1	1.2	5.1
Dams	8.4	2.5	3.5	14.4
Hazardous and solid waste	6.4	2.6	2.7	11.7
Levees	8.5	2.5	3.6	14.6
Gas distribution pipelines—leak repairs only	0.8	1.4	0.9	3.1
Broadband	2.3	2.4	1.5	6.2
Public parks and recreation	10.9	2.6	3.8	17.3
Rail	2.5	1.0	1.3	4.8
Schools	13.6	2.0	3.9	19.5

**TABLE 3B: Infrastructure Investments: Total Jobs Created with Budgetary Figures**

	1) Total Jobs/ \$1 Million	Annual Job Creation		Job-Years Created, All Years		
		Annual Budget	Job Creation per Year	# of Years	Total Budget	Total Job Years
Surface transportation	13.0	\$3.5 billion	45,500	10	\$35.0 billion	455,000
Water/wastewater	9.7	\$1.0 billion	9,700	10	\$10.0 billion	97,000
Electricity	3.9	\$1.4 billion	5,500	10	\$14.0 billion	55,000
Airports	5.7	\$135.1 million	800	10	\$1.4 billion	8,000
Inland waterways/ marine ports	5.1	\$48.3 million	200	10	\$483.0 million	2,000
Dams	14.4	\$125.5 million	1,800	10	\$1.3 billion	18,000
Hazardous and solid waste	11.7	\$9.7 million	100	10	\$97.0 million	1,000
Levees	14.6	\$225.2 million	3,300	10	\$2.3 billion	33,000
Gas distribution pipe- lines—leak repairs only	3.1	\$588.8 million	1,800	10	\$5.9 billion	18,000
Broadband	6.2	\$1.1 billion	6,800	10	\$11.0 billion	68,000
Public parks and recreation	17.3	\$328.2 million	5,700	10	\$3.3 billion	57,000
Rail	4.8	\$672.4 million	3,200	10	\$6.7 billion	32,000
Schools	19.5	\$1.2 billion	23,400	10	\$12.0 billion	234,000
<b>Total</b>		<b>\$10.3 billion</b>	<b>107,800</b>	<b>10</b>	<b>\$103.0 billion</b>	<b>1,078,000</b>

## NORTH CAROLINA Agriculture and Land Restoration Investments through THRIVE Agenda

**TABLE 4A: Agriculture and Land Restoration Investments: Job Creation—  
Direct, Indirect, and Induced Jobs**

	Job Creation per \$1 Million in Spending			
	1) Direct Jobs	2) Indirect Jobs	3) Induced Jobs	4) Total Jobs
<b><i>Agriculture</i></b>				
Regenerative agriculture	7.0	1.5	2.0	10.5
Farmland conservation	7.4	2.0	2.8	12.2
Organic farming	7.0	1.5	2.0	10.5
Resources for marginalized farmers	9.2	1.9	2.4	13.5
Agricultural R&D	5.2	2.1	2.5	9.8
<b><i>Land restoration</i></b>				
Pollution cleanup	6.7	2.1	2.8	11.6
Closing orphaned wells	0.6	0.9	0.6	2.1
Ecosystem restoration	13.0	2.6	3.8	19.4

**TABLE 4B: Agriculture and Land Restoration Investments: Total Jobs Created with Budgetary Figures**

	1) Total Jobs/ \$1 Million	Annual Job Creation		Job-Years Created, All Years		
		Annual Budget	Job Creation per Year	# of Years	Total Budget	Total Job Years
<b><i>Agriculture</i></b>						
Regenerative agriculture	10.5	\$1.3 billion	13,600	10	\$13.0 billion	136,000
Farmland conservation	12.2	\$804.4 million	9,800	10	\$8.0 billion	98,000
Organic farming	10.5	\$48.3 million	500	10	\$483.0 million	5,000
Resources for marginalized farmers	13.5	\$2.9 billion	39,200	10	\$29.0 billion	392,000
Agricultural R&D	9.8	\$80.4 million	800	10	\$804.0 million	8,000
<b><i>Land restoration</i></b>						
Pollution cleanup	11.6	\$405.4 million	4,700	10	\$4.1 billion	47,000
Closing orphaned wells	2.1	\$386.1 million	800	10	\$3.9 billion	8,000
Ecosystem restoration	19.4	\$32.2 million	600	10	\$322.0 million	6,000
<b>Total</b>		<b>\$6.0 billion</b>	<b>70,000</b>	<b>10</b>	<b>\$60.0 billion</b>	<b>700,000</b>

## NORTH CAROLINA Care Economy, Public Health, and Postal Service Investments through THRIVE Agenda

**TABLE 5A: Care Economy, Public Health, and Postal Service Job Creation—  
Direct, Indirect, and Induced Jobs**

	Job Creation per \$1 Million in Spending			
	1) Direct Jobs	2) Indirect Jobs	3) Induced Jobs	4) Total Jobs
Care economy	19.1	2.4	4.2	25.7
Public health	7.5	2.4	2.8	12.7
Postal service	7.1	1.1	3.3	11.5

**TABLE 5B: Care Economy, Public Health, and Postal Service Investments:  
Total Jobs Created with Budgetary Figures**

	1) Total Jobs/ \$1 Million	Annual Job Creation		Job-Years Created, All Years		
		Annual Budget	Job Creation per Year	# of Years	Total Budget	Total Job Years
Care economy	25.7	\$2.5 billion	64,200	10	\$25.0 billion	642,000
Public health	12.7	\$144.8 million	1,800	10	\$1.4 billion	18,000
Postal service	11.5	\$80.4 million	900	10	\$804.0 million	9,000
<b>Total</b>		<b>\$2.7 billion</b>	<b>66,900</b>	<b>10</b>	<b>\$27.0 billion</b>	<b>669,000</b>

**TABLE 6: NORTH CAROLINA Job Creation Estimates through all THRIVE Agenda Investments**

	Annual Budget and Job Creation Figures		Total Budget and Job-Years Figures	
	Annual Budget	Annual Job Creation	Total Budget	Total Job Creation, Job Years
Infrastructure investments	\$10.3 billion	107,800	\$103.0 billion	1,078,000
Clean energy investments	\$11.6 billion	60,700	\$116.0 billion	607,000
Agriculture and land restoration investments	\$6.0 billion	70,000	\$60.0 billion	700,000
Care economy, public health, and postal service investments	\$2.7 billion	66,900	\$27.0 billion	669,000
<b>Total</b>	<b>\$30.6 billion</b>	<b>305,400</b>	<b>\$306.0 billion</b>	<b>3,054,000</b>



## Acknowledgments

This project was supported financially by the U.S. Green New Deal Network. We gratefully acknowledge their support, as well as the fact that they respected our terms of engagement. Those terms included full autonomy in developing the statistical findings presented here. The study benefited substantially from discussions with Matt Ryan of the Working Families Party, Ben Beachy and Isabel Estevez of the Sierra Club, and Nick Berning of the Green New Deal Network. We also benefited from the excellent research assistance of Ray Caraher, Emily Diaz-Loar, and Bilen Gurara. Kim Weinstein somehow produced a clearly readable document from our cyber-piles of tables.

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## About the Authors

### **Robert Pollin**

Distinguished University Professor of Economics and  
Co-Director, Political Economy Research Institute (PERI)  
University of Massachusetts Amherst

### **Jeannette Wicks-Lim**

Associate Professor,  
Political Economy Research Institute (PERI)  
University of Massachusetts Amherst

### **Shouvik Chakraborty**

Assistant Professor,  
Political Economy Research Institute (PERI)  
University of Massachusetts Amherst

### **Gregor Semieniuk**

Assistant Professor,  
Political Economy Research Institute (PERI)  
University of Massachusetts Amherst

### **Chirag Lala**

Economics Ph.D. student,  
University of Massachusetts Amherst

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