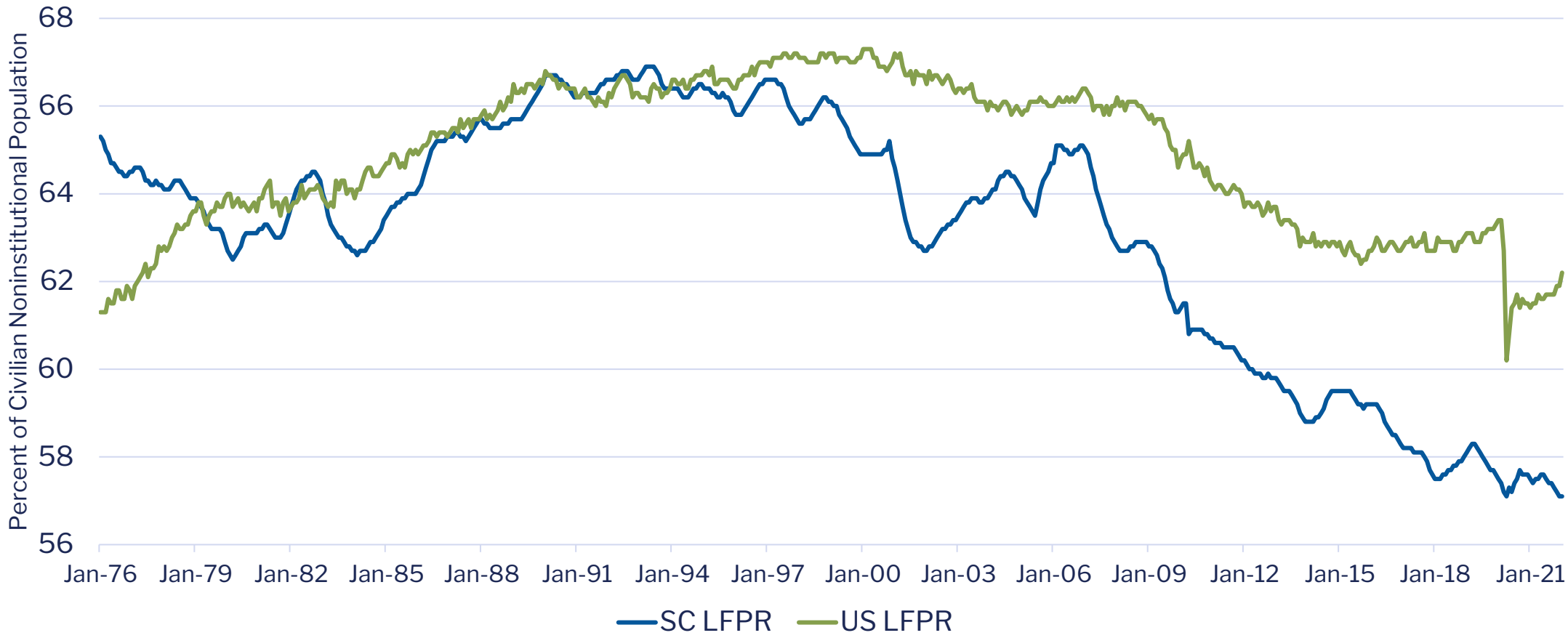
SOUTH CAROLINA LABOR FORCE PARTICIPATION TASK FORCE

SOUTH CAROLINA AND U.S. LFP RATES, 1976-2021



STARTING THE PROCESS

- The task force was first convened on March 23.
  - Eleven people were asked to serve on the task force, which included leaders from across academia, government, and the private sector, plus a DEW colleague (Dr. Erica Von Nessen, sr. economist) and me.
  - Erica and I developed an initial analysis and presented it to the group.
- Two further meetings followed to determine next steps.
- All materials are available online at https://dew.sc.gov/taskforce.

TWO-TRACK RESEARCH

- It was determined that, to better understand the labor market dynamics at play, two research products would be required.
- One would evaluate the question from a macro level, working to identify fundamental shifts in the state's demographic and economic characteristics correlated with trends in the LFPR. Chmura Economics & Analytics was selected as the vendor, and results are expected in the coming weeks.
- Another would evaluate the question from a micro level …

METHODOLOGY

- The massive surge of unemployment filings during the initial wave of the pandemic provided a unique research opportunity.

- DEW was able to use its UI records to identify individuals who:
  - Were present in our wage data in 2019
  - Filed a UI claim in 2020, thereby providing contact information to DEW
  - Were not present in our wage data in 2021

- We wanted to ascertain how many of these people had dropped out of the labor force, their reasons for doing so, and how they might be convinced to return.

DEPLOYMENT

- The survey was deployed online, with emails sent to 150,392 people who fit the population parameters.
  - Of those, 6,116 responded to the survey (about a 4% response rate).
- The survey included items on current work status, perceived barriers to employment, work history, and demographics.
  - Average time to complete was slightly less than 5 minutes.
- So, what did we find out?

THE TOP LINE

- Approximately 46% of respondents indicated they are currently working in some form.
  - Note that UI wage records do not include contractors or sole proprietors.
- An additional 26% are individuals who are not available to work (i.e., students, retirees, those with disability or health issues).
- **This leaves roughly 28% of respondents who are not working but could work.**

WHERE ARE THE 28 PERCENT?

- Certain groups were more likely to report that they were not working but available to work:

- Black/African American: 32 percent
- Aged 54 or younger: 33 percent
- Less than college degree: 31 percent
- Living in Tier IV counties: 37 percent

- *WDAs with highest share: Lower Savannah and Midlands*

BARRIERS TO ENTRY – OVERALL

Barrier	Percent
Low pay jobs	23%
Health	20%
Gaps in employment history	19%
Lack of transportation	18%
Optimal hours not available	16%
Disabilities	15%
Lack of child care	14%
Stay with child	13%
Age (too old)	12%
Criminal record	11%

BARRIERS TO ENTRY – BY SEX

Barrier	Females	Males
Low pay jobs	23%	27%
Health	20%	19%
Gaps in employment history	20%	20%
Optimal hours not available	20%	9%
Lack of Transportation	19%	18%
Lack of child care	19%	
Stay with child	18%	
Disabilities	15%	19%
Age (too old)	12%	15%
Low self-esteem	10%	9%
Criminal record		19%
Lack of information about jobs		8%

BARRIERS TO ENTRY – BY RACE

Barrier	Black/African American	White
Low pay jobs	22%	24%
Health	18%	25%
Gaps in employment history	17%	23%
Optimal hours not available	17%	17%
Lack of Transportation	21%	18%
Lack of child care	16%	13%
Stay with child	11%	16%
Disabilities	14%	17%
Age (too old)		19%
Low self-esteem		14%
Criminal record	13%	
Lack of information about jobs		
Lack of training	8%	

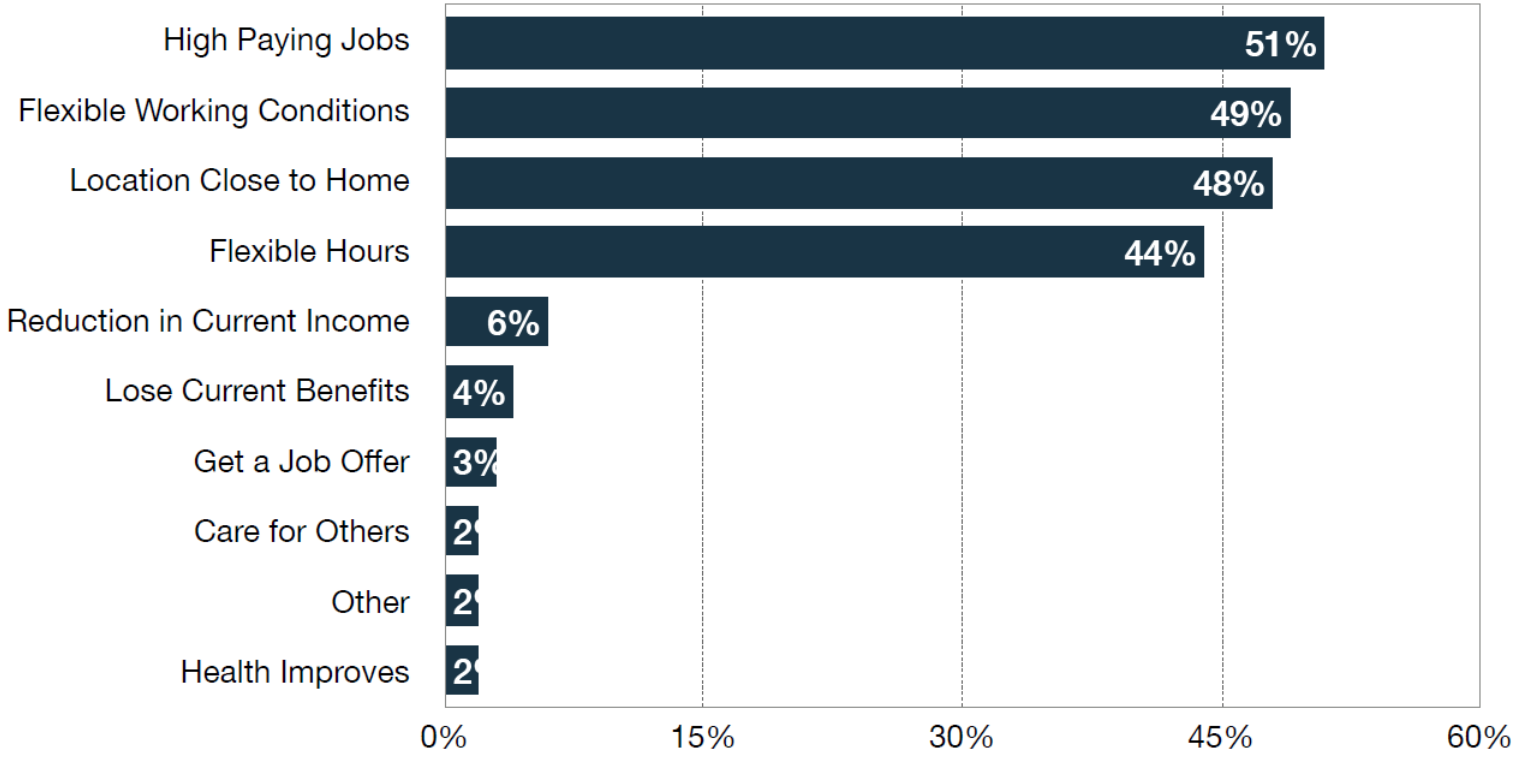
BARRIERS TO ENTRY – BY AGE

Barrier	24 years or younger	25-54 years	55 years or older
Low pay jobs	28%	24%	24%
Health		21%	27%
Gaps in employment history	20%	22%	14%
Optimal hours not available	14%	18%	14%
Lack of Transportation	23%	23%	7%
Lack of child care	23%	18%	
Stay with child	22%	18%	
Disabilities	11%	16%	17%
Age (too old)			36%
Low self-esteem	15%	10%	6%
Criminal record	11%	15%	
Lack of information about jobs			8%
Lack of training			
Family problems	12%		
Lack of computer skills			12%

BARRIERS TO ENTRY – BY TIER

Barrier	I	II	III	IV
Low pay jobs	22%	24%	25%	23%
Health	20%	22%	23%	17%
Gaps in employment history	19%	23%	18%	15%
Optimal hours not available	17%	17%	15%	12%
Disabilities	17%	13%	14%	19%
Lack of transportation	16%	18%	16%	27%
Lack of child care	14%	15%	11%	12%
Stay with child	14%	13%	13%	12%
Age (too old)	13%	11%	10%	11%
Criminal record	11%	12%	12%	11%

BRINGING PEOPLE BACK



When asked what would attract someone not currently in the labor force to look for work, the four clear responses largely corresponded with the barriers that people identified.

KEY TAKEAWAYS

- Results suggest that there may be several policy levers to improve the labor force participation rate:
  - Improved communication about relevant job opportunities
  - Increased availability of childcare and rural transportation
  - Enhanced accommodations for persons with health issues
  - Facilitating more flexible working conditions where possible

- It is concerning that, in a time of high wage growth, “sideliners” see low pay as an obstacle to employment. Do people have unrealistic expectations, or will businesses need to pay more? Further research (e.g., a focus group) may be necessary.

FUTURE OCCUPATIONAL CHALLENGES

- Cybersecurity
- Electric Vehicle
- Robotics
- Rural Areas

CYBERSECURITY OCCUPATIONS IN SOUTH CAROLINA, 2021

Occupation	Jobs	Wages	LQ: SC to US ratio	Typical Certifications Requested
Computer and Information Systems Managers	3,410	$132,010	48%	ITIL, CISA, CISSP
Computer Systems Analysts	8,300	$84,600	112%	Security Clearance, CompTIA Security+
Information Security Analysts	1,800	$96,310	78%	CISSP, SANS/GIAC, CompTIA Security+
Computer and Information Research Scientists	430	$106,440	94%	Security Clearance, CISSP, CISA
Computer Network Support Specialists	1,840	$64,820	71%	Security Clearance, CompTIA Security+, CCNA
Computer User Support Specialists	8,490	$51,080	88%	CompTIA Security+, Security Clearance, CompTIA Network+
Computer Network Architects	940	$105,470	38%	CCNP, CCNA, Security Clearance
Database Administrators	610	$83,180	49%	Security Clearance, CompTIA Security+, CCNA
Database Architects	380	$101,170	51%	CISSP, CISA, CompTIA Security+
Network and Computer Systems Administrators	3,900	$83,810	84%	CCNA, CCNP, CISSP
Software Developers	7,160	$102,630	36%	CompTIA Security+, CompTIA Network+, MCTS
Software Quality Assurance Analysts and Testers	570	$93,640	21%	Security Clearance, CompTIA Security+, ABET
Computer Occupations, All Other	2,240	$96,190	41%	Security Clearance, CISSP, CompTIA Security+
Computer Hardware Engineers	390	$102,100	36%	Security Clearance, CISSP, Info. Sys. Cert.
Computer Science Teachers, Postsecondary	330	$76,590	59%	ABET, CISSP, CISM
TOTAL JOBS	40,790	--	--	--

Source: Occupational Employment & Wage Statistics (BLS/DEW), Lightcast. Note: Wage is average annual, LQ = location quotient.

PROJECTED DEMAND FOR CYBERSECURITY WORKERS, 2030

Occupation	2020 Jobs	2030 Jobs (projected)	Annual Openings
Computer and Information Systems Managers	3,770	4,338	353
Computer Systems Analysts	8,823	9,901	752
Information Security Analysts	1,591	2,197	195
Computer and Information Research Scientists	508	582	45
Computer Network Support Specialists	1,594	1,834	147
Computer User Support Specialists	9,738	11,244	903
Computer Network Architects	899	1,003	66
Database Administrators and Architects	1,117	1,248	98
Network and Computer Systems Administrators	5,905	6,539	461
Software Developers and Software Quality Assurance Analysts and Testers	9,340	12,224	1,067
Computer Occupations, All Other	2,535	2,909	234
Computer Hardware Engineers	496	505	35
Computer Science Teachers, Postsecondary	285	310	29
TOTAL JOBS	46,601	54,834	4,385

Source: Occupational Employment & Wage Statistics (BLS/DEW), Employment Projections Program (DEW)

- That's an 18 percent increase in jobs with 9 percent annual churn.
- But South Carolina has already blown through some of these projections…

DEW CYBERSECURITY PROGRAMS

- Cyber Security Internship Program
  - 12-month program started July 5, 2022, consisting of four phases.
  - 40 interns per year.
  - Part-time paid internship provides candidates with on-the-job cybersecurity training while they are actively working as a security analyst for the agency.
    1. Work in a security operation center environment and learn about the incident-handling lifecycle, understand the cyber kill chain, and how to both identify and remediate security incidents.
    2. Gain core skills of a security analyst while being exposed to Security Information and Event Management (SIEM) technology, compliance log analysis, and best practice reviews.
    3. Learn about vulnerability management, threat hunting, risk tracking, compliance reporting, and more.
    4. Serve as team leads to new candidates entering the program and establish processes, train staff, and acquire management skills.
    5. What they will provide will pay for what we are spending on their pay and other expenses.
  - After one year and four cohorts complete the program, we will develop a template and take to other agencies and companies.

- Incumbent Worker Training: SC Works
  - Training resources for businesses.
  - Supports changing skills caused by:
    - New technology
    - Re-tooling
    - New product lines
    - New org structure
- Department of Defense Cyber Grants
  - 2020 and 2021 Grants = $1,317,829
  - Funding and technical assistance to manufacturers to meet cybersecurity standards within DOD contracts.

ELECTRIC VEHICLE TRAINING

Occupation	SOC*	Entry Education	Current SC Employment	Median Wage (Hourly)	Projected Annual Job Openings	2020 Completions
Design and Development						
Chemical Engineers	17-2041	Bachelor's Degree	400	$42.22	44	148
Computer Occupations, All Other	15-1299	Bachelor's Degree	2,240	$47.62	234	1,297
Electrical Engineers	17-2071	Bachelor's Degree	2,100	$43.09	166	179
Engineering Technicians, Ex. Drafters, All Other	17-3029	Associate's Degree	920	$35.78	Not available	101
Industrial Engineers	17-2112	Bachelor's Degree	6,560	$40.27	640	508
Materials Engineers	17-2131	Bachelor's Degree	730	$38.41	62	50
Mechanical Drafters	17-3013	Associate's Degree	610	$28.42	70	202
Mechanical Engineers	17-2141	Bachelor's Degree	5,490	$38.04	482	589
Software Developers	15-1252	Bachelor's Degree	7,160	$47.36	1,067	273
Electric Vehicle Maintenance						
Automotive Service Technicians & Mechanics	49-3023	Postsec. Non-Degree	10,280	$18.07	1,407	305
Infrastructure Development						
Electrical Power-Line Installers and Repairers	49-9051	High School Diploma	2,990	$29.31	2,433	110
Electricians	47-2111	High School Diploma	9,560	$22.88	1,303	39
Urban and Regional Planners	19-3051	Master's Degree	320	$29.09	372	43
Manufacturing						
Computer-Controlled Machine Tool Operators	51-9161	High School Diploma	1,830	$23.24	181	34
Electrical & Electronic Equipment Assemblers/ Electromechanical Equipment Assemblers	51-2022/ 51-2023	High School Diploma	4,290	$18.05	538	No CIP Identified
Engine and Other Machine Assemblers	51-2031	High School Diploma	820	$19.48	56	0
Industrial Production Managers	11-3051	Bachelor's Degree	2,910	$51.22	217	589
Inspectors, Testers, Sorters, Samplers, Weighers	51-9061	High School Diploma	11,650	$19.05	1,418	21
Laborers and Freight, Stock, & Material Movers	53-7062	No Formal Education	68,970	$15.43	9,850	No CIP Identified
Logisticians (supply chain analysts)	13-1081	Bachelor's Degree	3,270	$33.56	427	3,801
Machinists	51-4041	High School Diploma	10,510	$18.21	1,560	384
Maintenance and Repair Workers, General	49-9071	High School Diploma	26,030	$18.07	2,843	0
Structural Metal Fabricators and Fitters	51-2041	High School Diploma	990	$18.01	98	5
Team Assemblers	51-2092	High School Diploma	37,330	$17.12	4,776	No CIP Identified
Transportation Inspectors	53-6051	High School Diploma	120	$34.69	20	No CIP Identified
Scientific Research						
Chemists	19-2031	Bachelor's Degree	1,500	$29.86	213	272
Materials Scientists	19-2032	Bachelor's Degree	Not available	Not available	Not available	0

Note: Some SOC Codes may have changed with latest revisions.
For example, 51-2022 and 51-2023 are now combined as 51-2028. Information was matched using best available information.

EV TRAINING

- There are jobs in the industry where projected annual openings far exceed the number of completions.
- It is not always the case that someone needs a specific credential to take on a job, however, you have occupations like software developers, auto technicians, etc. where South Carolina state would either need to:
  - Attract workers
  - Push more people into a relevant degree program
- Having the workforce is important to meet the needs of any assembly or battery plant that might be interested in locating in the state.

NEXT STEPS

- DEW, the S.C. Department of Commerce, and the Office of the Governor are finding innovative ways to increase the production of electronic transportation, develop training, and create jobs.

- Executive Order No. 2022-31: DEW will evaluate:
    1. Existing workforce capacity
    2. Complete a supply-gap analysis
    3. Make recommendations to the governor and the General Assembly.

- Recommend legislative attention and support to upcoming EV investment and expansion opportunities.

ROBOTICS

- China was responsible for half of all industrial-robot installations in 2021. – Wall Street Journal

Industry Title	Number of Establishments	Average Employment	Average Weekly Wage
Support activities for forestry	129	637	$989
Support activities for oil and gas operations	19	51	$1,606
Solar electric power generation	69	172	$1,435
Commercial printing, except screen and books	283	3,462	$1,137
Computer storage device manufacturing	6	3	$4,028
Semiconductors and related device mfg.	23	56	$4,127
Ship building and repairing	13	395	$1,193
Boat building	29	2,735	$916
Industrial machinery merchant wholesalers	544	4,390	$1,625
Data processing, hosting and related svcs	1,012	4,182	$1,913
Engineering services	1,629	15,249	$1,766
Custom computer programming services	2,783	8,018	$2,099
Computer systems design services	2,025	9,741	$2,025
Administrative management consulting services	2,036	7,940	$2,002
Process and logistics consulting services	367	2,729	$1,409
Other management consulting services	947	2,003	$1,477
Research and Dev in Biotech (except Nano)	235	684	$3,343
Research and Dev in Sciences (ex Nano&Bio)	306	3,088	$2,752
Colleges and universities	242	37,310	$1,192

S.C. ROBOTIC IMPACT IN MANUFACTURING

Robotics-Oriented Questions	2018	2019
Establishments in manufacturing in the state that had robots	634 (9.8%)	719 (11.1%)
Number of employees exposed to robots	56,171	66,328

Source: U.S. Census Bureau conducted the Annual Survey of Manufactures (ASM) and introduced robotics-oriented questions.

S.C. ROBOTIC INSTRUCTIONAL PROGRAMS

- Surge in robotics reflects long-run trends toward automation.
  - Workers will still be needed to develop and maintain these systems.
  - Robotics technicians in S.C. earn over $25 per hour on average.
    - Engineers in the space making even more.
  - S.C. only has 120 such technicians: 31% less than what would be expected based on population size.
- Training:
  - Robotics Engineers
    - 8 People received a credential in 2021.
  - Mechatronics, etc.: This breaks down to 30 general courses.
    - Electronics Engineering Technology
    - Basic Mechatronics
    - Advanced Manufacturing Technology
    - Electrical Controls Technology
    - Advanced Manufacturing Automation
    - Electronics and Computer Fundamentals
  - Robotics: Two courses.
    - Robotics Technology: Certificate Program at Horry Georgetown Technical College
    - Fundamentals of Robotics: Certificate Program at Midlands Technical College
- Continuing to attract high-end manufacturing to South Carolina may well depend on being able to provide a deeper talent pool in robotics.

RURAL WORKFORCE PROGRAMS

- Rural Analysis
- Connection Points Expansion Grant
- Scotsman Pilot
- Career Coach

RURAL ANALYSIS OF SOUTH CAROLINA

- Rural areas have historically experienced consistently higher unemployment rates.
- Rural Analysis: Conducted by the University of South Carolina Darla Moore School of Business.
  - Finding: laid-off workers living in rural areas were more likely to still be unemployed one year later than those living in more urbanized regions.
  - Even when accounting for differences in:
    - Race,
    - Gender,
    - Age,
    - Income and education levels,
    - Prior industry of employment, and
    - Occupation.

RURAL INITIATIVES

- Connection Point Expansion Grant
  - Provides free public access to:
    - Computers
    - UI Claims assistance
    - Tools for jobseekers
  - More than 160 across the state associated with libraries.
  - Grant will expand locations, particularly in rural areas.
    - Faith-based organizations
    - Nonprofits
  - Grant awards up to $25,000 to establish a Connection Point.
- Scotsman Pilot
  - Partnered with Scotsman Ice in Allendale County.
  - Soft skills curriculum and training class created by Scotsman and DEW.
  - Nine candidates, within close proximity, were chosen to participate.
    - One got a job before training ended.
    - Eight completed training.
    - Four were hired by Scotsman.
    - Four hired by other employers.
- Career Coach
  - Mobile SC Works Center.
  - Brings services to claimants and jobseekers.
  - Stops in rural areas prioritized.

CONTACT US!

- If you need help finding data about our state's workforce, whether it's on our website (scworkforceinfo.com) or not, please don't hesitate to contact Labor Market Information.

- Email address: lmicustomerservice@dew.sc.gov

- Also let us know if you have any ideas for new products that would help you and your organization, or if you'd like for us to present in your community!