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Research provides insights into the Western Cape renewable energy skills

A newly released research report, [*Renewable Energy Skills Mapping and Labour Market Analysis in the Western Cape*](#), offers a comprehensive analysis of the renewable energy skills landscape in the province. The research was conducted by researchers at the University of Cape Town's (UCT) [*Southern Africa Labour and Development Research Unit \(SALDRU\)*](#).

The research provides an in-depth examination of the skills needs and related employment trends within the solar, wind and energy storage value chains, which the National Business Initiative identified as an opportunity. Drawing on national and provincial employment data, insights from Technical and Vocational Education and Training (TVET) colleges, and engagements with industry stakeholders, the report delivers a comprehensive view of the skills landscape in which those in the opportunity areas operate.

The research reveals similar findings across the three opportunity areas, with a significant overlap in the technical skills required. Logistics managers, mechanical engineers and electricians were identified as required within each opportunity area. Yet current employment in these high-skilled roles remains low, potentially indicating a limited supply of suitably qualified workers with the relevant technical expertise needed to foster growth.

"Many of these occupations appear on the 2024 Western Cape Occupations in High Demand list. This may mean that businesses new to these opportunity areas will struggle to find these workers or will need to offer higher salaries initially to attract these workers," says [*Associate Professor Ariane De Lannoy*](#), chief researcher at SALDRU and co-author of the research.

While technical training is essential, the research also highlights soft skills as a key workforce challenge, particularly problem-solving and decision-making. Further business insights identified limited access to financing and unpredictable demand as core barriers to growth. Businesses further emphasised the need for a flexible, multiskilled workforce that can adapt to changing market conditions.

"Moreover, since most businesses operate across multiple parts of the renewable energy value chain, there is a clear demand for broad-based skill sets rather than narrowly focused expertise. A workforce with diverse capabilities is better positioned to navigate the

uncertainties of national power supply and fluctuating sectoral demand,” explains Katherine Davidson, junior researcher on the project.

The report includes perspectives from City of Cape Town TVET colleges, which all strongly committed to expanding renewable energy training. Some institutions specifically noted the importance of integrating renewable energy content into existing qualifications. This approach aligns with broader study findings, indicating that businesses would benefit from graduates with broad foundational knowledge to adapt to evolving industry needs.

By embedding renewable energy content into existing qualifications, De Lannoy says TVET colleges could produce graduates with diverse and flexible skill sets to meet changing demand dynamics.

“As the country and province seek to transition to a future with more sustainable energy production, our research provides insights into several areas where various stakeholders from education, industry and government could collaborate to ensure the province’s renewable energy sector is equipped with the tools it needs to grow,” she adds.

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