

# Energy Policy

## Evaluating available solar photovoltaic business opportunities in coal phase-out regions – An energy transition case of Steve Tshwete local municipality in South Africa

Stanley Semelane <sup>a,c</sup>, Nnamdi Nwulu <sup>b</sup>, Njabulo Kambule <sup>a</sup>, Henerica Tazvinga<sup>d</sup>

<sup>a</sup> Department of Geography, Environmental Management and Energy Studies, University of Johannesburg, Auckland Park Campus, 2006, Johannesburg, South Africa

<sup>b</sup> Department of Electrical and Electronic Engineering Science, University of Johannesburg, Auckland Park Campus, 2006, Johannesburg, South Africa

<sup>c</sup> Smart Places, Council for Scientific and Industrial Research, Brummeria, Pretoria, South Africa

<sup>d</sup> South African Weather Service, Centurion, Pretoria, South Africa

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### Abstract

The global energy transition may have unintended consequences for businesses that provide services to the coal sector. Businesses operating in coal regions like Steve Tshwete Local Municipality (STLM) might be left stranded due to the coal phase-out. However, solar photovoltaic (PV) business opportunities can support a just energy transition. The diffusion of solar PV owing to the available grid infrastructure and solar energy resource (5.61 kW/m<sup>2</sup>/day) in STLM, South Africa positions this region as a potential solar development area. Therefore, leveraging solar PV commercial benefits for local enterprises is just. This study deployed a structured survey to understand solar business involvement and opportunities in STLM. The study found that 57.1% of businesses operating in STLM offer services to either coal mines or coal power stations. Only 14.3% of businesses were found to have offered services in the solar PV sector, signalling low participation. However, this does not mean that STLM businesses cannot increase their participation in the solar PV sector thus mitigate against potential coal phase-out socio-economic impacts. The exploratory factor analysis deployed for data analysis showed two factors (solar opportunities and regional participation) that were found to be reliable and valid on the Cronbach's Alpha test.