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South African National Energy
Development Institute (SOCI) Ltd.



Success Story of SHIP in SA

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Who is SANEDI?



Department of
Mineral Resources
and Energy



Research &
Development of
technology

Data Management

Capacity Building

Project Management

Demonstration
& Pilot Projects

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History: A few larger SA Solar Thermal Installations

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Solar Water Heating at Zuid Afrikaans Hospital



4 Flat Plate Collector Systems (46m²)

3630 litre pumped system

Installed 16 Dec 2013



Solar Water Heating for industry...



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Solar Water Heating for Beer!



Solar Heating for Residences



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Wits Junction Residences

Solar Water heating for Horticulture



75% reduction in carbon emissions

Development of renewable energies

7000m² collector field

2600m³ storage



Reduction in operating costs

Improvement of energy efficiency

Job creation



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Klein Karoo International (Pty) Ltd Tannery

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Klein Karoo International Tannery

KKI SHIP system specs



🌱 Supplies ostrich leather, crocodile leather, and game skins

🌱 Installation logistical details

- Country: South Africa
- Nearest place: Oudtshoorn
- Installation: October, 2018
- Primary service: Process Heat
- System count: 1

🌱 In one year:

- Solar yield of 397.00 MWh
- Avoidance of 137000.00 kilograms CO₂ emissions.

KKI SHIP system specs (cont.)



General info:

- Circulation: Pumped
- Heat exchange: Indirect
- Collector type: Flat plate
- Collector area: 556.80 m²
- Collector power: 390.00 kW_{th}
- Collector tilt: 45°
- Supplier: GREENoneTEC
- Capacity: 40000 litres
- Backup: None
- Supplier: Country of origin South Africa

SHIP system showcase for SA (2018)



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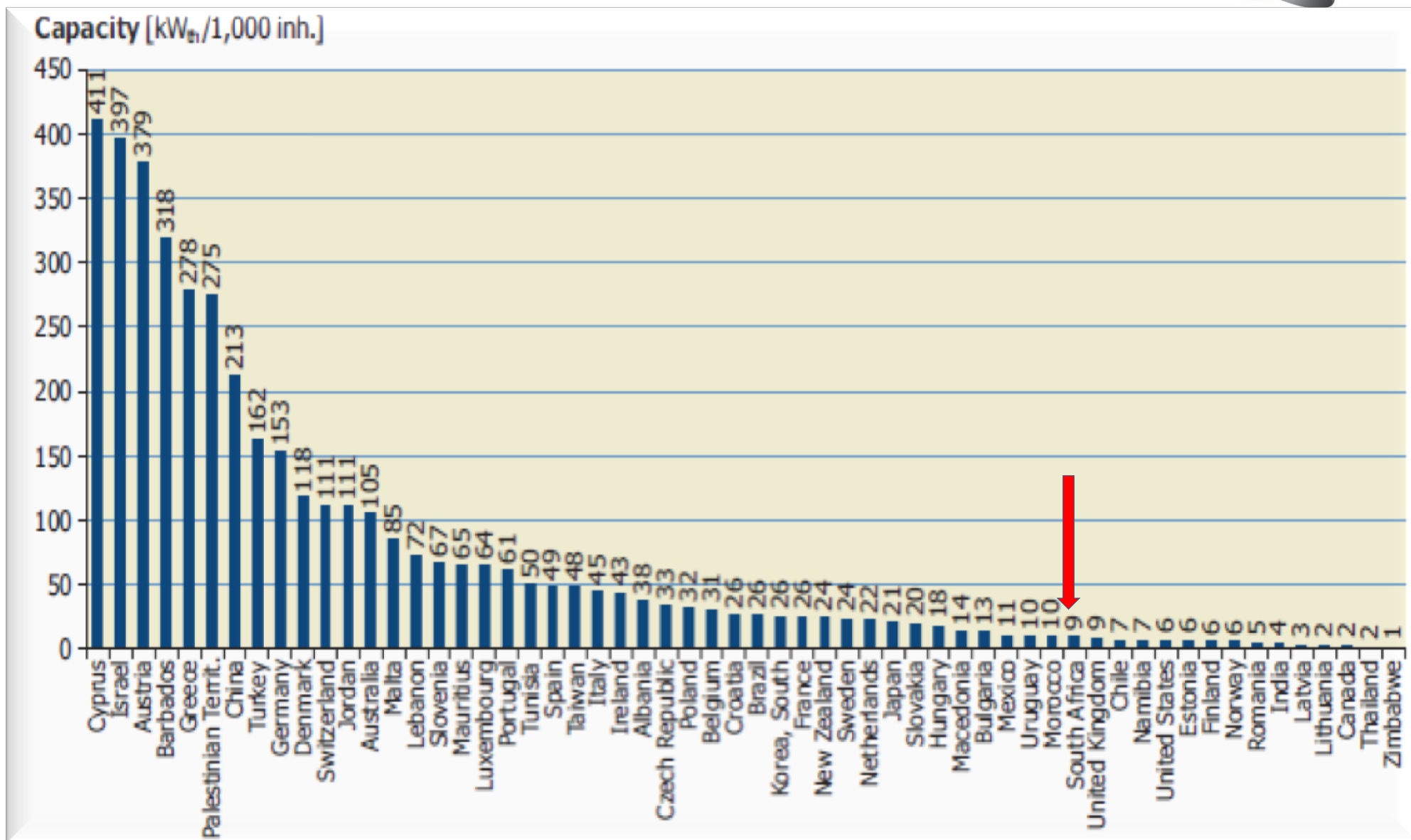
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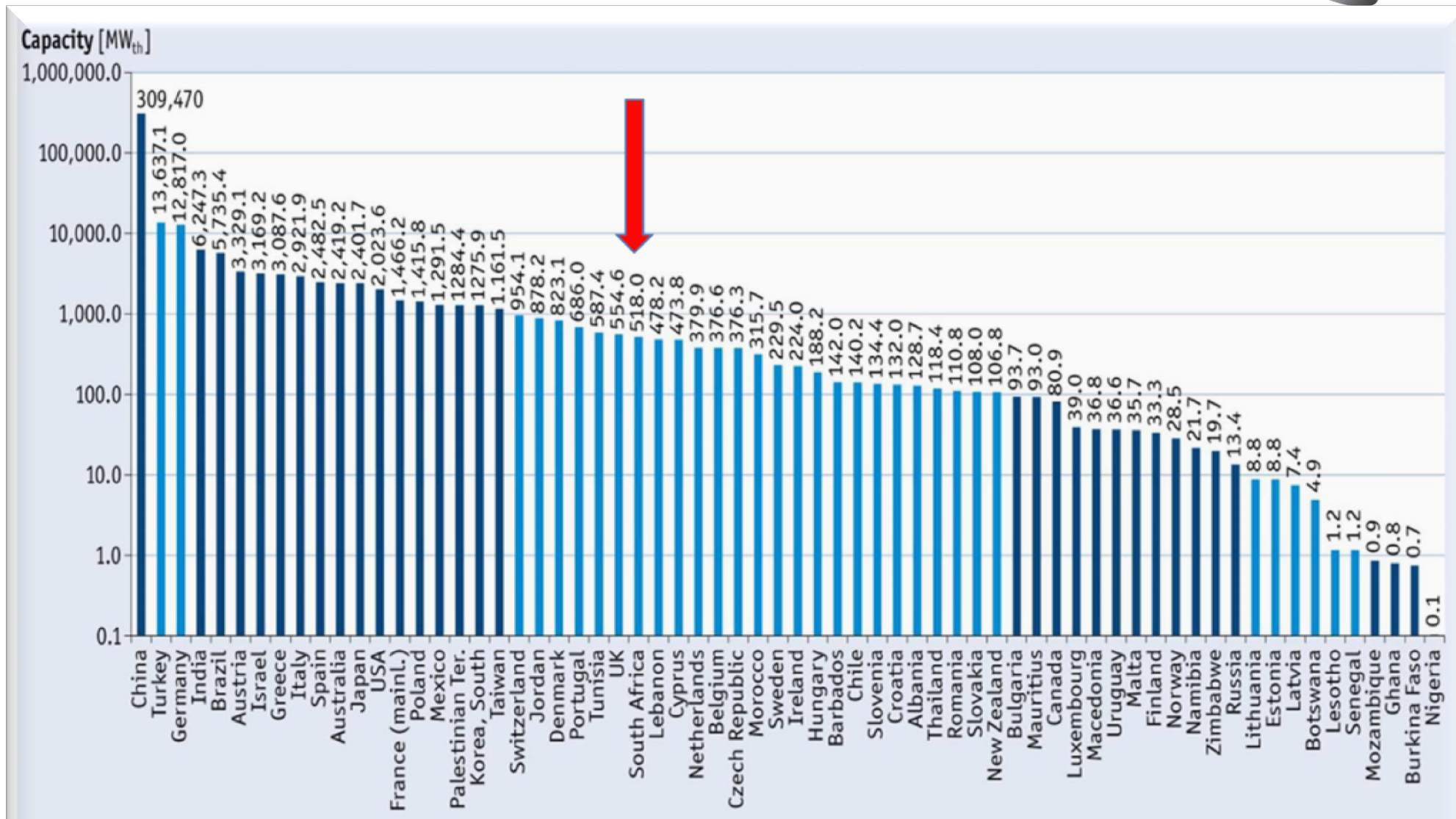
Where is SA currently ranked in terms of Solar Thermal Installations?

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2014 Global Ranking of m² and kWth installed



2018 Global Ranking of m² and MWth installed



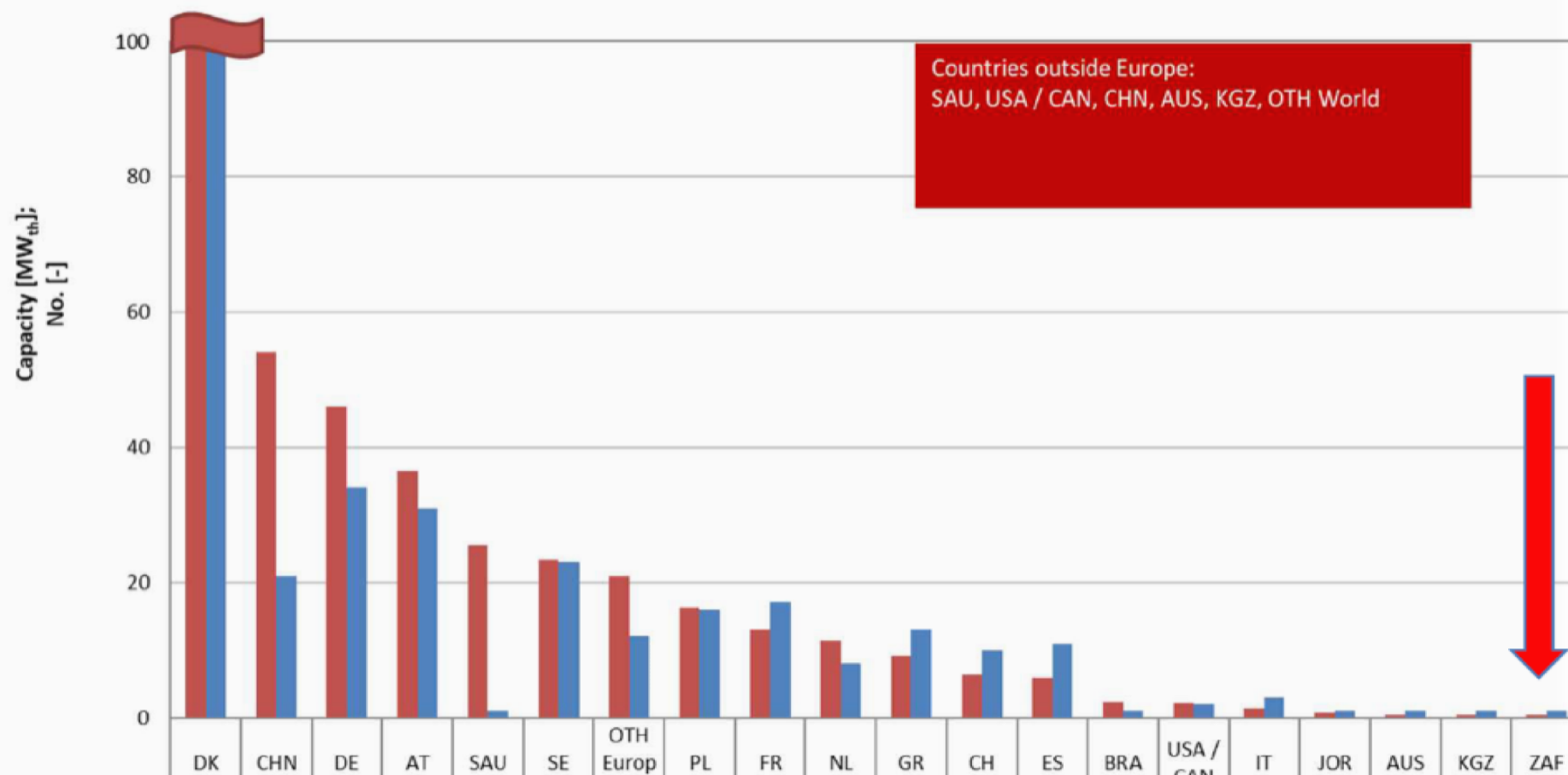
Source: Solar Heat Worldwide, Edition 2018, IEA SHC

District and Residential Heating Global Capacity 2018



Large scale systems for district heating and residential buildings

Capacities installed and number of systems by country



Capacity [MWth]	956,6	54,0	46,0	36,5	25,4	23,4	20,9	16,3	13,0	11,4	9,1	6,5	5,9	2,3	2,2	1,5	0,8	0,5	0,5	0,4
Number of systems [-]	117	21	34	31	1	23	12	16	17	8	13	10	11	1	2	3	1	1	1	1

Potential for solar thermal systems in South Africa



Ways to utilise solar potential with solar thermal systems in order to significantly reduce electricity demand and thus also CO₂ emissions of SA

Possible job creation if support is stimulated towards local assembly and/or manufacturing



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**THANK
YOU**

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