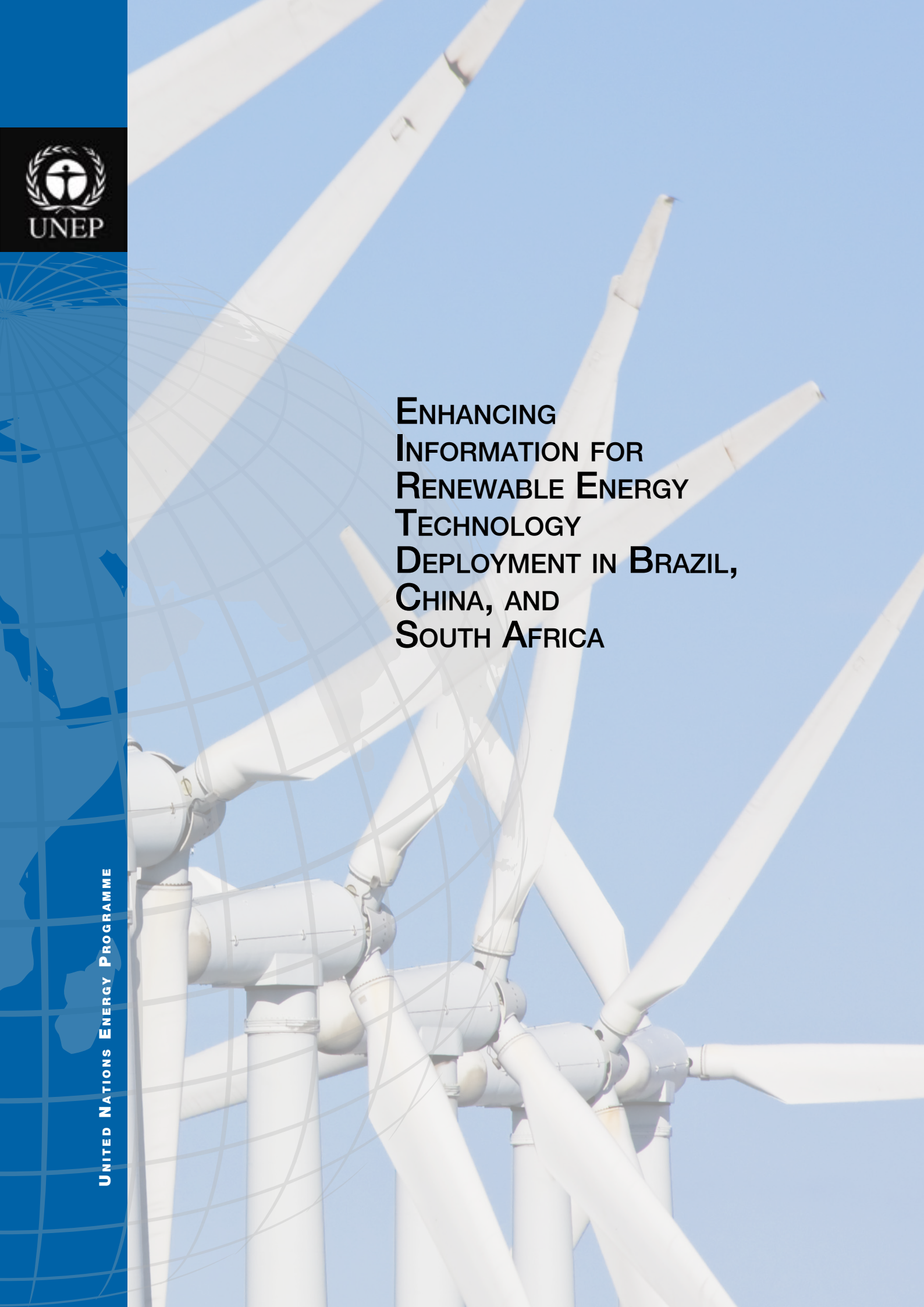

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Enhancing Information for Renewable Energy Technology Deployment in Brazil, China, and South Africa

United Nations Energy Programme

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EXECUTIVE SUMMARY

Greenhouse gas emissions from Big Emerging Markets, BEM, will likely exceed those from developed countries within the next 20 years, stressing the need for emerging markets efforts to reduce the risk of climate change (Solomon, 2007). At the same time, the Big Emerging Markets and their allies have called for a commitment to extending Kyoto but are reluctant to accept legally binding emissions reduction targets.

Brazil, China and South Africa – three of the key Big Emerging Markets – are rapidly increasing their energy consumption, with the energy sector contributing the most to their emissions, 20%, 65% and 71% respectively. To date, Brazil, China and South Africa have relied primarily on coal and/or large hydropower generation and exploit an insignificant share of their 'total realisable mid-term potentials' for solar and wind energy (IEA, 2009). Therefore, major policy decisions are needed to mobilize public and private resources on a large scale. Energy efficiency measures together with renewable sources of energy could supply the new generating capacity needed to keep pace with these countries economic growth, as all are well endowed with rich renewable energy sources.

Figure 1 Percentage Change in Primary Renewable Energy Consumption

Figure 2 Percentage Change in GHG Emissions From 1990 To 2007