



# CLOSING THE CIRCUIT

ENGINEERS WORKING IN THE TEEMING CITIES AND LONELY DESERTS OF NORTH AFRICA ARE CREATING THE LAST LINKS IN A POWER GRID THAT WILL RING THE MEDITERRANEAN SEA BY PETER FAIRLEY

WITH BANDANNAS protecting their faces from the blistering sun and blowing sand, day laborers smooth the ground over freshly buried cables at Libya's newest electrical substation. Until a few years ago, this same patch of ochre earth in the sparsely populated Bir Osta Milad district, located on the outskirts of Tripoli, was the site of a Scud missile plant. Today, thanks to Libya's oil revenues and its recent rapprochement with the West, the rocket parts are gone, replaced by gas-insulated switchgear, transformers, and state-of-the-art controls. This and more than a dozen other 400-kilovolt substations located throughout Libya will bolster that country's beleaguered power grid. But these improvements are also part of a much larger drama. That's because they will form a key bridge for an electrical superhighway that could soon bind the fractious nations on the south side of the Mediterranean Sea.

The coming electrical unification

of North Africa will advance a grand scheme known as the Mediterranean Electricity Ring, which has been the stuff of speeches and studies for decades. Engineers have recently made much progress on the ground, and perhaps as soon as mid-2009 they will cinch together all the power systems from Morocco to Syria with those of Europe. The same momentum could see the entire MedRing finally completed by the end of the present decade, connecting more than half a billion people in Europe, Africa, and Asia.

The MedRing took its first big lurch toward reality in 1997, when Spain and Morocco energized a set of under-sea power cables bridging the Strait of Gibraltar. That event brought the integrated grids of Morocco, Algeria, and Tunisia—a legacy of French colonial rule—into synchronous operation with the Union for the Co-ordination of Transmission of Electricity (UCTE), whose 240 000 kilometers of high-voltage transmission lines connect 26 European countries.