

# Double-action power stations: Energy and hydrogen

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(PhysOrg.com) -- Gas power plants could be cheaply retrofitted to generate hydrogen as well as power, chemists say in *Green Chemistry*, a Royal Society of Chemistry journal.

A catalyst would convert methane into [hydrogen](#) gas and combustible coke, allowing the power station to produce hydrogen alongside electricity.

Gadi Rothenberg and colleagues at the University of Amsterdam and at IRCE Lyon report in *Green Chemistry* that the catalyst could be cheaply installed into existing plants.

This kind of technology could ease a transition to a [hydrogen economy](#), reducing the need for heavy investment in large hydrogen-focused plants.

Generating hydrogen and power together "is a conceptual change," says Rothenberg.

"When you're going to produce hydrogen, you needn't build a huge new [power](#) plant to do that. Diverting some of your existing methane feed to produce hydrogen just makes sense."

The group tested many new catalysts based on ceria doped with other metals. One nickel-based form shows excellent catalytic activity and would cost only \$10 per kilogram.

More information: Jurriaan Beckers, [Green Chemistry](#), 2009, DOI: 10.1039/b900516a, [www.rsc.org/Publishing/Journal ... cle.asp?doi=b900516a](http://www.rsc.org/Publishing/Journal...cle.asp?doi=b900516a)

Provided by Royal Society of Chemistry

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