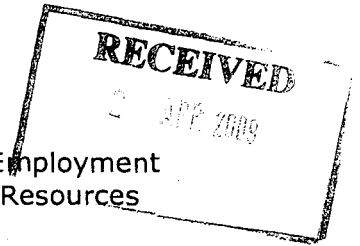




Chief Scientific Adviser to the Government

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An Taoiseach, Mr. Brian Cowan T.D.,
Ms. Mary Coughlan T.D., Tánaiste and Minister for Enterprise, Trade & Employment
Mr. Eamonn Ryan T.D., Minister for Communications, Energy & Natural Resources



3rd April 2009

An Important Strategic Energy Initiative for Ireland

Dear Taoiseach,

I wish to draw to the attention of the Government an important opportunity to solve much of the country's strategic energy requirements, to enable Ireland to meet its obligations under the Kyoto protocol, and to underpin the international competitiveness of our economy for decades into the future. The central idea is to harness wind power to pumped sea water storage reservoirs. These would then produce a steady supply of hydro powered electricity. In principle, such a system could supply the full power requirements for the country, with a surplus for export.

Credit for the original idea goes to Dr Igor Shvets, Prof. Applied Physics in TCD. He has done extensive studies on the dynamics and costing of such a system. Further studies have been commissioned and carried out by Natural Energy Ireland, led by Mr Graham O'Donnell. They have developed a comprehensive plan which I believe could achieve a transformation in our economic future.

The essential features and benefits of the plan are as follows:

- ◆ Construction of two pumped seawater reservoirs in selected mountain valleys in Donegal, Mayo, Galway or Kerry.
- ◆ Installation of associated wind turbines.
- ◆ A unit of one reservoir (2km x 2km in area) and up to 1,000 wind turbines would supply 1 GW of electricity – equivalent to Moneypoint.
- ◆ Over 50 potential sites for such a unit have been identified.
- ◆ The conversion of intermittent wind energy to steady hydro energy from such high output source points obviates the need for much of the planned investment (€11bn) in reconfiguration of the electricity grid.
- ◆ The investment required would be largely in established engineering and civil works, utilising Irish skills and materials.
- ◆ The investment required to achieve energy independence is in the range of €10-12bn and could be structured to facilitate secure investment for Irish private funds.
- ◆ The costings which have been done indicate that it should be highly profitable investment both for the country and for private investors.

I have had extensive discussions with Prof. Shvets and with Mr. O'Donnell and believe that this plan has such potential that it should receive urgent attention at this time.

Yours sincerely,

Patrick Cunningham
Chief Scientific Adviser

Wilton Park House, Wilton Place, Dublin 2, Ireland

Tel: +353 1 607 3270 Fax: +353 1 607 3059 E-mail: patrick.cunningham@chiefscientificadviser.ie

www.chiefscientificadviser.ie