

Geothermal Energy – A Local Source of Sustainable Energy

Recent studies carried out as part of SEI's R&D programme have confirmed that deep geothermal resources could contribute to Ireland's long term sustainable energy needs. To realise the full potential of these resources a number of key areas for action are identified and should be considered in the Energy Green Paper review.

1. **Legal/regulatory framework** to provide for systematic exploration and development of deep geothermal resources. The investment needed to define the nature and extent of deep geothermal resources will only come about when such a framework is in place. In recognition of this the Intelligent Energy Europe programme launched an Altener project across seven European countries, and coordinated by the Irish company CSA, to elaborate a suitable framework that could be applied across Europe to address this barrier to the development of deep geothermal energy.
2. Undertaking **regional geophysical surveys and targeted drilling programmes** to identify those areas with the greatest potential for high temperature geothermal resources.
3. Funding collaborative **research projects** with national and international research organisations to improve the performance of lower temperature geothermal resources for cost effective electricity production and distributed heating systems.

The combined impact of a structured implementation of actions in these three areas will make a positive impact on Ireland's future energy needs. Deep geothermal energy is a national resource that has yet to be defined, that should be brought into national energy calculations.

Sustainable Energy Ireland and the Geological Survey of Ireland can implement the necessary actions to realise the energy potential of Ireland's deep geothermal resources.

Off-Shore Oil and Gas – Ireland's Yet to be Discovered Energy

The potential for significant hydrocarbon discoveries in the Irish off-shore has yet to be established. Over the past 10 years and most particularly in the last 3 years the Petroleum Affairs Division of DCMNR has advanced the understanding of some of the factors that apply in Ireland's offshore areas. Much of this work has been carried out in collaboration with private sector companies and Irish and international research organisations.

CSA Group Submission to Energy Green Paper 2006

However, if Ireland's off-shore hydrocarbon potential is to be realised the work of PAD needs to be supported through increased funding for research as part of a national strategic development plan. It is in the national interest to direct private and public sector programmes through a structured plan with targets and deliverables that advance our knowledge of the available resource.

Apart from the contribution to national security of supply issues Ireland's hydrocarbon resources could contribute to overall European energy supply. There are many technical and logistical barriers to be overcome in the implementation of effective exploration programmes. There are issues around the availability of drilling rigs suitable for Irish deep water areas. On the development side there are well documented issues around on-shore site facilities.

Five steps to securing our hydrocarbon resources are

1. Improve our knowledge of Irish off-shore geology
2. Increase our understanding of hydrocarbon systems in the Irish off-shore basins
3. Stimulate knowledge sharing among all participants in Irish off-shore hydrocarbon related activities
4. Produce a strategic development plan to define the "Yet to be Discovered" potential with deliverable production targets by year 10
5. Embark on outreach programmes to inform all stakeholders about the national hydrocarbon development strategy with periodic progress reports

The framework for implementing these actions is in place. However, current programmes need to be supported by giving them a higher priority in the national energy mix. The Green Paper Review should advance this process by outlining specific policies promoting hydrocarbon resources.