

Barriers to Deployment of Shallow Geothermal Energy in Ireland

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Thermal Energy Use - 2011

- Energy use for thermal purposes in 2011 :
 - accounted for 34% of total primary energy supply and
 - 41% of final energy demand.
- Oil is the dominant fuel accounting for 48% of fuel inputs in 2011.
- **RE contribution** to thermal energy (RES-H) was **4.8% in 2011**.
- Ireland's **target for 2010 was 5%**.
- **Residential sector accounts for 47% thermal energy usage** in 2011
- Energy use in buildings & thermal energy:
 - Accounts for 41% of demand
 - fell by 14% in 2011

NREAP – Revised 2012

- NREAP Publication -

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Renewable Energy from Heat Pumps (ktoe)	10	18	25	31	38	44	51	58	64	71	78	84

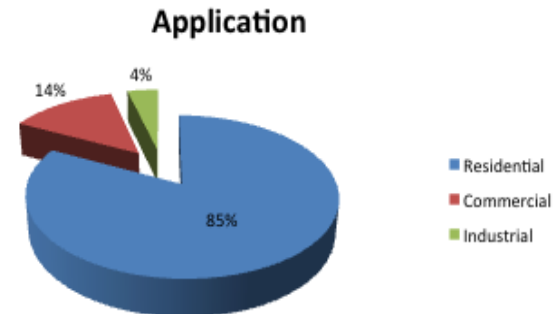
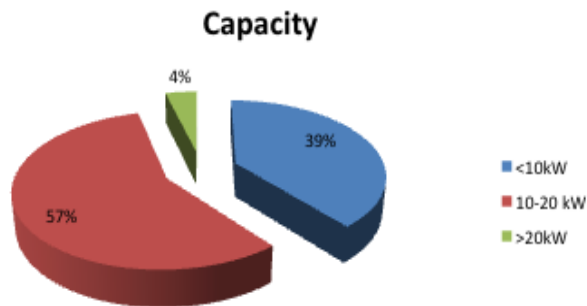
- First Progress Report – January 2012

	2009	2010
Renewable Energy from Heat Pumps (ktoe)		
- of which aerothermal	22	23
- of which geothermal		
- of which hydrothermal		

Shallow Geothermal – Market Status

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Residential										
New Units	546	990	1300	1900	2205	2673	2751	922	1293	989
Cumulative Units	546	1536	2836	4736	6941	9614	12365	13287	14580	15569
Total Installed Capacity (MW)	8	23	43	71	78	117	148	162	178	190
Commercial										
New Units	5	10	50	100	220	268	306	103	144	239
Cumulative Units	5	15	65	165	385	653	959	1062	1206	1445
Total Installed Capacity (MW)		1	2	7	15	25	38	42	48	57
Total										
New Units	551	1000	1350	2000	2425	2941	3057	1025	1437	1228
Cumulative Units	551	1551	2901	4901	7326	10267	13324	14349	15786	17014
Total Installed Capacity (MW)	8	24	45	78	93	142	186	204	226	247

Source: Heat Pump Association of Ireland, 2012



Market Status - continued

- Estimated **Ground Source** Component in 2010 of c. **152 MW** installed capacity out of **204 MW total for heat pumps**
- Current Survey of Installers suggests **that little or no ground source systems** other than large commercial have been installed in 2011 & 2012
- Increase of c. 20MW installed capacity p. a. reported by IHPA is as a result of air source

Financial Barriers

- Lack of **dedicated support** for GSHP technologies at residential level
- Current grant systems are supporting energy saving measures only
- **Higher installation costs** compared to other renewable technologies
- Commercial scheme support only if SGE systems are part of other technologies and energy saving measures

Non-Technical Barriers

- Lack of **information** for end users as well as government agencies and local authorities
- Lack of **technical guidelines** for designers, installers – variable system installation quality
- Lack of dedicated **training** in system design, drilling and completion of collector systems
 - FETAC accreditation does not cover key aspects of system installation
- Lack of dedicated **certification**

Non-Technical Barriers - continued

- Lack of dedicated **support tools** for government agencies and local authorities:
 - Current Status of Deployment
 - Resource Availability / Management
 - Suitability of Deployment of GS technologies
 - Efficiency Data and RE Contributions of existing systems
- Lack of dedicated support tools for end users as a decision making/management tool

Thank you!



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Discussion Session:

- Is current policy National / SEAP / LARES considering SGE systems?
- What are the barriers to GSHP deployment perceived at local authority and government agency level?
- Is the lack of registration/permitting seen as an issue ? If so why and for what aspects?