

## EXPLORATION – GROUP 1

1. **Size of the area:** It was felt that the area for Geothermal exploration licences should be larger than PLs (Mineral Prospecting licence) and an area of approximately 20x20km suggested as a possible size to be considered.
2. **Defining the boundary of a licence.** The outline is open for discussion between PL and townland based system vs national grid system. Bundled PL or national grids sections (or group of PLs) approach discussed. The bundle to be considered as one license. No decision on preference both could work.
  - License Fee – This cost is usually to cover administration of the licence
  - Buffer zones were discussed but this refers to development and so was not completely explored.
3. **Duration** – 6 years with 2 year reviews within the 6 year period + 2 years renewal with a provision for retention if required.
  - Confidentiality – data confidential for 6 years similar to minerals. Information made public in the event that an exploration licence is surrendered. The state could use of data but it must be kept confidential.
4. **Conditions of license:** all conditions set out, in addition need to include:
  - induced seismicity,
  - impacts of the testing phase,
  - pump testing,
  - fracturing,
  - impact of testing phase on other existing developments (including underground – mining or other geothermal).
  - Closure of drill holes, ensure standard procedures are used for example API standards.
  - Framework and requirement to notify the identification of other resources (oil, gas or other)
5. **Exploration in Urban Areas:**
  - There will be some logistical issues for example getting large rigs in through the city,
  - 24/7 drilling,
  - Noise issues,
  - induced seismicity,there will be a need for prior notification/approval for drilling is required. Hole diameter notification, discharge license may be required, hole abandonment procedures. Necessary way leaves or other approvals may be required. No specific activities for urban areas. The area of exploration licences in urban areas is likely to be different to that in the country. No conclusions were arrived at and it requires further consideration. An area of approx 1km<sup>2</sup> area proposed for shallow geothermal? A depth requires to be defined for the purpose of differentiating between shallow and geothermal resource exploration.
6. **Reconnaissance (regional) licenses.** The view was this is not required.
7. **Expression of Interest (EOI):** It was felt that the Statement of Interest used in the Mineral industry was a good system and a similar facility should be included in the Geothermal Bill.
8. **Intensive Activities:** these would include:
  - drilling 24/7,

- surface geophysics,
  - pump testing phases,
  - compliance with bye laws and permissions in place including discharge license). These will be exempt from planning and EIA. Should pump testing be included as part of the exploration license and not require a separate abstraction license? One stop shop for temporary activities.
  - Hydraulic stimulation to be notified in advance.
9. **Initial Round of Licensing:** companies to put in EOIs for areas (1<sup>st</sup> June issue – 3 months for EOI submission) to identify competition. Allow applicant to bundle PLs. Urban areas will have a different system.

## DEVELOPMENT – GROUP 2

1. **Ancillary rights:** pumping, drilling beneath 3<sup>rd</sup> party property, sampling, install maintain and remove equipment underground. Access to monitor groundwater and surface water all need to be included. Remove ‘the right to cause significant subsidence’.
2. **Size of license:** There may be separate resources at different depths so area should not be used by itself to define a licence. Depth should also be considered. Other geological resources development need to be considered. A buffer zone needs to be considered
3. **Royalties:** The criteria in the position paper for deciding on the level of royalty were not disputed. Quality of resources in Ireland, especially temperature should be included. It was advocated by some participants that they should be set at zero to encourage development.
4. **Other conditions.** Avoid interference with other geological resource development. Minimisation (according to best practice) development of seismic events. Maximum sustainable extraction of the resource
5. **Name of licence:** Geothermal Development License