Geothermal financing developments

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Introduction

Although once considered too great a risk from a technical, financial and legal perspective, geothermal energy is now a rising trend – at least in the Netherlands. The number of geothermal energy projects in the Netherlands is rapidly increasing and the developments seem to be reaching a tipping point. One such project is Trias Westland, a geothermal project initiated by 49 greenhouse companies which aim to heat their greenhouses in a renewable manner and against stable costs. Trias Westland will be the first project to carry out drillings in the Triassic at a depth of four kilometres to retrieve heat.

This update provides a brief overview of geothermal financing developments in the Netherlands.

Background

Successfully securing financing (by way of a combination of equity, subsidies and debt financing) was a major impediment to the realisation of geothermal projects. Whereas geothermal energy has always been a promising technique with significant potential within the energy transition framework, initiatives suffered from a lack of financing possibilities – particularly in the development and drilling phases – in view of uncertainty around the actual heat capacity of wells and other risks, such as:

- the bycatch of oil and gas;
- corrosion; and
- water injection issues.

Financing parties were largely unfamiliar with the technical aspects and therefore hesitant to provide financing. In addition, whereas certain government backing was available under the former guarantee scheme, this required full recourse against the project sponsors (a new scheme was introduced on January 1 2017, under which the required recourse is limited).

Permitting and subsidy scheme

The Mining Act applies to geothermal energy at a depth of 500 metres below the earth's surface or deeper. Under this act, both an exploration permit and a production permit are required. In addition, environmental permits may be required under the Environmental Permitting (General Provisions) Act, depending on:

- the area where the geothermal project will be realised; and
- the actual structure of the geothermal installations.

Although there are increasing calls for Dutch legislation to be better tailored to geothermal energy, no legislative amendments have been proposed to date. However, EBN – which invests in the exploration, extraction and storage of gas and oil on behalf of the state – is expected to contribute to

the further development of the geothermal energy sector by sharing its knowledge of and experience in the oil and gas sector, the legal basis for which will be introduced in the Mining Act in Autumn 2017. The industry has called for clearer distinctions in existing legislation between oil and gas projects on the one hand and geothermal projects on the other. According to the industry, some provisions are clearly tailored to oil and gas projects and overcomplicate the legal framework for geothermal energy. Notably, major players active in the sector have a strong background in oil and gas and are shaping the geothermal industry's standards accordingly.

In a recently published, critical report on the state of the geothermal industry sector in the Netherlands, the State Supervision of Mines (the national regulator) expressed its concerns regarding the safety of geothermal projects being developed and suggested amendments to the Mining Act which would impose strict requirements on operators and other developing parties in terms of expertise. The State Supervision of Mines further called on the industry to make better use of the knowledge and experience of the oil and gas sector and tailor the safety standards in that field to geothermal projects. In a follow up interview in the Dutch financial newspaper, *Financieele Dagblad*, shortly after the report's publication, State Supervision of Mines Inspector General Harry van der Meijden underlined the need for the geothermal energy industry to implement proper processes and systems that are comparable with those used in the oil industry, so that risks can be identified in a timely fashion and appropriate measures can be taken. At present, geothermal energy projects are developed mainly by parties in the greenhouse industry, which have developed processes for the cultivation of their crops, but lack the knowledge to do so for the geothermal industry and therefore need to engage third parties.

Geothermal energy projects may become eligible for an Encouraging Sustainable Energy Production (SDE+) subsidy in the Netherlands. An SDE+ subsidy serves as compensation for the shortfall between the cost of the renewable energy generated and the market price. The SDE+ subsidy scheme is available not only for geothermal energy projects, but also for other renewable energy sources, including:

- biomass;
- wind (both offshore and onshore, which are separate categories);
- water; and
- solar.

In 2017 subsidy requests can be filed in two separate rounds. In each round, €6 billion is available for all categories (the second round will open in October 2017).

In addition to the SDE+ subsidy, several other European, national and local subsidy and other support schemes are available for geothermal energy projects in the Netherlands. The government has provided, among other things, a guarantee scheme, under which investors are protected against the financial risks of potential unsuccessful drilling. In effect, the scheme serves as insurance in the event that the heat output of the source is lower than expected. Also noteworthy are the various 'green deals' concluded by the government, which are different in scope, but share the overall aim of supporting the further development of the renewable energy sector. On June 19 2017 the government, the Netherlands Organisation for Applied Scientific Research and seven consortia from the industry signed a green deal for the further development of ultra-deep geothermal energy (at a depth of four kilometres or deeper), evidencing that the government sees the potential of geothermal energy for the energy transition and is willing to facilitate the maturing of the sector and market.

What to expect

It is hard to predict how the legislative power and the industry itself will respond to the calls made by the State Supervision of Mines. It is doubtful that the calls will go unanswered, particularly in view of the rapid developments in the geothermal energy industry. However, on the other hand, the industry wants the existing legal framework to be reshaped in order to meet the specific needs of geothermal energy projects and remove bottlenecks. In light of geothermal energy's potential in the much-desired energy transition, it is hoped that these growing pains can be quickly overcome and that the industry can continue to develop itself as a standalone professional industry.

On the financing side, the Energy Transition Financing Facility seems to be a promising step in the

right direction. Under this programme, €100 million will be made available in the form of subordinated financing by state-owned bank BNG (on the basis of an 80% guarantee by the Ministry of Economic Affairs) for developing markets, such as the geothermal energy industry.

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