

Demand for geothermal energy development towards a green economy in Vietnam

Dr. Lothar Wissing, Chairman of the IEA Geothermal,
Ladies and Gentlemen!

I am very please today to be invited to the Workshop on Geothermal Energy Development held at the Institute of Geosciences and Mineral Resources. Throughout the workshop program, I found it to be a very interesting and attractive program, suitable for what our geothermal potential is. It is hoped that after this workshop, we will have a better understanding of geothermal development in Vietnam as well as in the countries participating in this workshop and around the world. Especially, this would be a chance to open up the potential for collaborative research and development of this energy source - green, clean, renewable and virtually zero emissions of greenhouse gases - is the perfect source of energy to be prioritized in development for a green economy.

In 2011, the Government of Vietnam has set out the policy of economic development for the country in that the developmen must be associated with environmental protection towards a green economy. Green development is the trend of choice for a non-disaster, friendly environment and responding the current needs without compromising or harming the ability to meet the requirements of the future generation. Green economy contributes to poverty reduction without having to pay a heavy price for over-exploitation of natural resources, limiting the decline of biodiversity and degradation of ecosystems; It creates new employment opportunities - high productivity employment, along with efficiency in improving the ecological environment and stabilizing emissions at a low level. Green economy helps the developing countries to achieve economic and social benefits in a number of areas such as: developing clean

and sustainable energy, securing energy security for the country and limiting environmental impacts.

As you know, energy production accounts for 30% of global greenhouse gas emissions. In Vietnam this figure is even higher as about 50% of the electricity comes from coal and gas power plants. While Vietnam's commitment to reduce greenhouse gas emissions in COP21 is: Unconditional emission reductions of 8% by 2030 compared to conventional development scenarios; Conditional emission reductions reach 25% by 2030 compared to conventional development scenarios if we receive international support from bilateral and multilateral co-operation.

Current energy sources in Vietnam include: hydro, coal, gas, oil, renewable energy and imports. Currently, renewable energy accounts for only 6.28%. Of the renewable installed capacity, small hydro power plants account for 80%, biomass and biogas 14%, wind 6%, solar 0.2%, waste 0.1% and geothermal 0%. In 2016, Vietnam revised the national electricity development planning for 2011-2020 with a view to 2030, with the capacity of renewable energy plants reaching 9.9% by 2020; 12.5% by 2025 and 21% by 2030. In the national electricity development plan, geothermal is not mentioned as one of the renewable energy sources planned. Perhaps because of the geothermal potential in Vietnam is modest or we may not have enough information and experience in developing this energy source.

About geothermal in Vietnam:

We have been interested in geothermal research for quite some time, starting with studies of hot springs in hydrological programs in cooperation with experts from France, USA, New Zealand and Italy from the 1980s, 1990s of the last century until recent years. Vietnamese scientists have investigated and evaluated the potential of geothermal resources in most of Vietnam. Recently,

with the support of Japan, we have started to research and install ground source heat pump system and hope that this system will be well developed in Vietnam in the future.

Through surveys and research, we realize that Vietnam has significant geothermal potential and can develop geothermal power plants. However, at present, we only have some geothermal applications such as bathing, swimming pool, tourism, fine-salt making, animal husbandry, medical treatment and bottling of mineral water.

Ladies and Gentlemen!

Today and tomorrow, in the cool weather of Hanoi capital, we would like you to have a good and effective working hours between scientists, experts and managers in the field of geothermal coming from many countries in the world with Vietnamese partners coming from state management agencies, universities, research institutes and companies in the field of geology and energy.

Geothermal development in Vietnam will inevitably bring a new source of energy, new opportunities, capacity building for scientists, creating more jobs and contribute to the green economy that our country is heading to.

Sharing your knowledge and experience is very important and valuable. I am confident that this workshop is a great opportunity to learn about the knowledge and experience in geothermal development, to establish new collaborative relationships and to inspire geothermal research and development in Vietnam.

Wishing you all a good health and successful workshop!