COP31 Global Geothermal Ambition 2050

We, the governments, financial institutions, businesses, international organizations and other organisations as the Participants in the COP31 "Global Geothermal Ambition":

Recalling decision 1/CMA.5 on the outcome of the first global stocktake, including its call to triple renewable energy capacity globally by 2030;

Recognizing geothermal energy's strategic value for energy security and climate action, through reliable domestic renewable power and heat, greater diversity of supply and reduced dependence on fossil fuels;

Recognizing geothermal energy's potential to strengthen industrial competitiveness and support socio-economic development through affordable and reliable energy supply, enhanced industrial productivity, local value creation and job creation;

Recognizing the value of geothermal power as a reliable source of renewable electricity that can support resilient energy systems and industrial demand;

Welcoming the COP31 Presidency's objective of increasing electricity's share of global final energy consumption to 35 per cent by 2035, and recognising the contribution that reliable geothermal power and direct-use heat can make to it;

Recognizing the added value of geothermal direct use, including heating, cooling and applications in agri-food systems, industry and tourism;

Acknowledging that innovation in next-generation geothermal technologies, including advances in drilling and subsurface expertise, can expand geothermal development to countries previously considered unsuitable for geothermal energy production;

Recognizing the importance of stable policies, enabling regulatory and institutional frameworks, timely permitting and supporting infrastructure for accelerating geothermal deployment;

Recognizing the need to mobilize investment and finance and address exploration risk and high cost of capital challenges to accelerate deployment of geothermal projects;

Recognizing the importance of international cooperation, technology partnerships and capacity building in enabling countries with diverse resources and capabilities to harness their geothermal potential;

Recognizing analysis by the International Renewable Energy Agency (IRENA) indicating that, under a pathway consistent with limiting global warming to 1.5°C, total primary geothermal energy supply for heat and power could rise from

around 2.5 EJ today to around 31 EJ by 2050, with global geothermal power capacity increasing from 15.6 GW in 2025 to 193 GW over the same period;

Acknowledging that this Ambition represents a collective global objective, that pathways and rates of geothermal development will differ according to resource endowments, starting points and national circumstances, and that each Participant retains full authority to determine its own energy policies, plans and strategies;

Declare our intent to work collaboratively and expeditiously towards a collective global goal of scaling geothermal energy supply for power and heat to 12 times 2025 levels by 2050.

To support this collective ambition, we commit to:

Contribute to this ambition through actions appropriate to our respective roles and capabilities, building on existing plans and goals;

Strengthen national policies and enabling frameworks, reflecting national circumstances and priorities, including timely permitting, predictable investment conditions, supportive market conditions and coordinated development of electricity grids and heat networks;

Support the mobilisation of public and private investment, including measures to address exploration risk and improve access to affordable finance;

Advance geothermal direct use, including heating and cooling in buildings, industry and agri-food systems, working with local governments, utilities and businesses to connect resources with demand and deliver affordable energy services;

Support research, demonstration and deployment of established and next-generation geothermal technologies, promote workforce training and skills development, strengthen supply chains, and encourage voluntary exchange of knowledge, expertise and best practices across industries;

Support international cooperation and technical assistance for emerging markets, developing economies and countries establishing geothermal programmes, including resource assessment, project preparation and voluntary technology cooperation on mutually agreed terms;

Support environmentally and socially responsible geothermal development, respecting the rights of affected communities, including Indigenous Peoples, and promoting meaningful participation and local economic benefits;

Agree on a way forward to review collective progress towards this Ambition, making use of existing analytical and reporting processes, including those of IRENA;

Call on governments, financial institutions, businesses, international organizations, and other organisations to join the COP31 “Global Geothermal Ambition”, and welcome and encourage further voluntary actions, partnerships and specific contributions from participants and other partners to advance this Ambition.