MEMORANDUM OF UNDERSTANDING

AMONG

THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA

AND

THE MINISTRY OF PETROLEUM AND MINERAL RESOURCES OF THE ARAB REPUBLIC OF EGYPT

AND

THE MINISTRY OF ELECTRCITY & RENEWABLE ENERGY OF THE ARAB REPUBLIC OF EGYPT

ON COOPERATION IN THE FIELD OF ENERGY

Preamble

The Department of Energy of the United States of America (**DOE**), the Ministry of Petroleum and Mineral Resources of the Arab Republic of Egypt (**MoP**) and the Ministry of Electricity & Renewable Energy of the Arab Republic of Egypt (**MERE**), hereafter referred to individually as a "Participant" and collectively as "the Participants":

NOTING the desire to strengthen the friendly relations that exist between the Participants' countries and to promote the expansion of bilateral cooperation between them based on the principles of equality, mutual benefit, and full respect of sovereignty; and

NOTING that strengthening cooperation among the Participants in the field of energy will benefit the advancement of bilateral relations and cooperation between the two countries,

Have reached the following understanding:

Paragraph 1 Purpose

The purpose of this Memorandum of Understanding is to create a framework for good-faith cooperation in the field of energy among the Participants, and to facilitate their sharing of technical knowledge, advice, skills, and expertise.

Paragraph 2 Planned Areas of Cooperation

The planned cooperation among the Participants under this Memorandum of Understanding includes the following areas:

- (a) Technology and skills transfer, as well as planning for research and development cooperation, in the various fields of the conventional and unconventional oil and gas industry: upstream, midstream and downstream;
- (b) Clean coal technology;
- (c) Carbon Capture Utilization and Storage;
- (d) Bio-economy (bio-fuels & bio-plastics);
- (e) Energy Efficiency and Renewable Energy;
- (f) Green Building Technologies;
- (g) Smart Grids and Grid Resilience; and

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(h) Other subject areas as the Participants may jointly decide in writing.

Paragraph 3 Forms of Cooperation

The Participants plan to encourage cooperation and collaboration between and among technical experts at DOE and its national laboratories and the MoP and the MERE and their research departments on mutually beneficial, energy-related research and work opportunities in both countries. The forms of cooperation under this Memorandum of Understanding may include the following:

- (a) Exchange of publicly available scientific and technical information;
- (b) Conduct of workshops and other meetings as well as study tours and immersive training opportunities; and
- (c) Other forms of cooperation as the Participants may jointly decide in writing.

Paragraph 4 Funding and Applicable Law

Each Participant intends to carry out the cooperative activities contemplated by this Memorandum of Understanding subject to the availability of funds and in accordance with the laws, regulations, policies, and procedures of its respective country.

Paragraph 5 Strategic Dialogue

- (a) The Participants intend to engage in energy-related discussions at least once a year at the U.S.-Egypt Strategic Energy Dialogue, to be held either in the United States of America or in Egypt. Each Participant is expected to bear its own internal and external costs incurred in connection with attendance at the U.S.-Egypt Strategic Energy Dialogue.
- (b) Each Participant intends to designate a primary point of contact to coordinate the overall cooperation among the Participants across the areas described in Paragraph 2 of this Memorandum of Understanding ("Coordinators"). The Participants plan to establish an Energy Working Group to develop work plans and coordinate the cooperation among the Participants in the areas described in Paragraph 2 of this Memorandum of Understanding. The Working Group should be comprised of technical

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experts from each of the Participants and from other institutions as mutually determined by the Participants. The Coordinators and Working Group should meet via conference call or in person before the annual U.S.-Egypt Strategic Energy Dialogue meeting and submit their recommendations to the heads of the delegations of the U.S.-Egypt Strategic Energy Dialogue for consideration.

(c) The role of the Energy Working Group is expected to be to identify collaboration opportunities and activities to be conducted under this Memorandum of Understanding. The role of the Coordinators is expected to be to develop the draft agendas for the Strategic Energy Dialogue meetings in cooperation with the Working Group.

Paragraph 6 Nonbinding Understanding

This Memorandum of Understanding represents an expression of the Participants' interest to explore and develop means of future cooperation and does not represent or create any binding legal commitment or any kind of contractual or non- contractual relations between or among the Participants.

Paragraph 7 Consultation on Questions

Any questions concerning the interpretation or the implementation of this Memorandum of Understanding should be addressed in consultation between or among the Participants.

Paragraph 8 Modification

The provisions of this Memorandum of Understanding may be modified by mutual consent of the Participants in writing. Modifications, once approved and signed by the Participants, form an integral part of this Memorandum of Understanding.

Paragraph 9 Commencement and Discontinuation

- (a) Cooperation under this Memorandum of Understanding may commence on the date of signature.
- (b) Cooperation under this Memorandum of Understanding may continue for an initial period of two (2) years, may be extended automatically for two (2) successive periods of 12 months, and thereafter may be further extended by mutual written consent of the Participants. The Participants may discontinue their participation in this Memorandum of



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Understanding in writing by mutual consent at any time. Any Participant intending to discontinue its participation in this Memorandum of Understanding may do so at any time in its sole discretion, and should endeavour to give at least three (3) months' advance notice in writing to the other two Participants.

Signed at Cairo, in three (3) originals in the English language, which is an official text, this 25th day of July 2019. The Participants intend to prepare an Arabic language text of this Memorandum of Understanding that may be considered equally official upon an exchange of diplomatic notes confirming that the two language texts of the Memorandum of Understanding are in conformity.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF PETROLEUM AND MINERAL RESOURCES AND THE MINISTRY OF ELECTRICITY & RENEWABLE ENERGY OF THE ARAB REPUBLIC OF EGYPT:

Rick Perry

Secretary of Energy

RICK PERRY

H.E. Tarek EL Molla

Minister of Petroleum and Mineral

Resources

