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AMBITIOUS ALTERNATIVE ENERGY RESEARCH PROGRAM LAUNCHED AT THE WEIZMANN INSTITUTE OF SCIENCE

REHOVOT, Israel -- An ambitious multidisciplinary research initiative into alternative, sustainable energy resources is being launched by the Weizmann Institute of Science in Rehovot, Israel. Its goal is to significantly advance the search for solutions to the world's most pressing energy problems.

Some of the major global energy challenges confronting researchers and policymakers include:

- The demand for energy has risen sharply in recent years, fueled by rapidly rising standards of living and expanding populations, especially in China and India.
- If nothing is done to change current patterns, energy demand will rise nearly 60% by the year 2030.
- Non-renewable energy sources such as fossil fuel are running out; petroleum-based fuel supplies could be held hostage to political upheavals, affecting the peace and security of Israel and the entire world.
- The continuing upward spiral of oil prices threatens the stability of the global economy.
- Burning fossil fuels is a major cause of air pollution and increases the accumulation of greenhouse gasses in the upper atmosphere, which may already be causing global warming.

Weizmann Institute scientists are concerned about this state of affairs, and a number of them have recently made commitments to help search for solutions.

“Developing alternative means of producing energy is a necessary step for dealing with the continuing energy crisis,” says Institute President Prof. Ilan Chet. “Creating fresh, sustainable methods of producing energy in the required amounts will only be possible if we can gain the knowledge to invent completely new technologies. The Weizmann Institute of Science has an obligation to take a lead in the global effort in this field. We believe we can help shape the planet's future.”

Prof. Mordechai Sheves, Dean of the Faculty of Chemistry adds, “The special nature of the Weizmann Institute, with its emphasis on multidisciplinary scientific cooperation, makes the Institute one of the most promising places to pursue such solutions.”

The Weizmann Institute plans to raise significant funds for its Initiative for Research in Sustainable and Alternative Energy, which will support innovative scientific projects in the field. The Institute also

hopes to recruit promising young scientists as well as established researchers to join the effort and share their expertise with the Institute's multidisciplinary task force of leading scientists.

Already at this early stage, Institute scientists have created some original approaches to producing alternative energy. One example is the manufacture of methanol (which is currently extracted from fossil fuels) from the sun's energy. If the method proves successful, it may, in the future, provide a relatively clean, renewable, and environmentally friendly fuel.

Various research groups in physics and chemistry will focus on energy conversion, storage, and conservation. Some projects are already making progress in converting the sun's energy to electricity and fuel. A research team in the life sciences plans to investigate ways of utilizing plants and biomass as energy sources. Institute scientists also carry out basic research in nuclear fusion. New lubricants containing nanomaterials developed at the Institute promise to increase the efficiency of machinery, thereby reducing fuel consumption.

These and other promising avenues of study at the Initiative for Research in Sustainable and Alternative Energy at the Weizmann Institute will lead the way in finding new and better solutions to meet the world's growing energy needs.

The Weizmann Institute of Science in Rehovot, Israel, is one of the world's top-ranking multidisciplinary research institutions. Noted for its wide-ranging exploration of the natural and exact sciences, the Institute is home to 2,500 scientists, students, technicians and supporting staff. Institute research efforts include the search for new ways of fighting disease and hunger, examining leading questions in mathematics and computer science, probing the physics of matter and the universe, creating novel materials and developing new strategies for protecting the environment.

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