ORDEM DOS ENGENHEIROS

WORLD ENGINEERING DAY

WFEO / FMOI

In support of UNESCO World Engineering Day

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Com o Alto Patrocínio de Sua Excelência

Under the High Patronage of the President of the Portuguese Republic

O Presidente da República

Lisbon

March 4th 2024

UNESCO WED 2024 and WFEO MEETINGS PROGRAM

The production and use of energy are, more than ever, at the centre of countries' strategic considerations, not only due to the need for decarbonisation policies in energy systems, given the emissions of greenhouse gases and their impacts on climate change but also due to issues of energy autonomy and economic independence that COVID-19, armed conflicts, and epic geopolitical divisions have dramatically highlighted.

The overarching goal of the Paris Agreement, adopted at the UN Climate Change Conference (COP21), is to limit the increase in the global average temperature to a maximum of 2°C above pre-industrial levels, with a commitment to restrict this temperature increase to 1.5°C. It recognizes that the global energy crisis, beyond its impact on climate change, poses a significant challenge to efforts to achieve energy security. This underscores the urgency of transforming energy systems to be more reliable and resilient and the need to accelerate clean and fair transitions to renewable energy.

Also, the COP28 held in Dubai calls for the world to "transition away from fossil fuels in energy systems in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050." This signifies a rapid shift away from fossil fuels and re-developing whole systems to operate on low carbon electricity.

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Feb. 16th, 2024

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Engineering Solutions for a Sustainable World

Lisbon March 4th 2024

The theme "Energy Transition, Climate Change and Sustainability," besides its political, social, economic, and environmental implications, constitutes a significant matter requiring active involvement from the field of engineering. In its "Statement on Energy and Climate Change," the Standing Technical Committee on Energy of WFEO (the World Federation of Engineering Organizations) emphasizes some aspects that contemporary society grapples with, particularly electrification, which is undoubtedly one of the main drivers of the energy transition.

The decommissioning of conventional fossil energy plants and the massive development of variable renewable energies can pose issues of continuity and quality in electricity supply. Backup power plants, cost-effective and efficient energy storage technologies, demand flexibility development, and electrical grid development will be necessary to overcome the variability of renewable energies.

The issue of access to energy in general and electricity, in particular, remains a significant challenge in many regions of the world, requiring different responses for supplying large developing megacities and remote off-grid locations.

Sustainability means a better understanding of the impact of our productive activities and ways of life, and creating the technologies, processes and infrastructures that make them possible. Engineering for sustainable development is especially critical in developing countries, to mitigate the effects of climate change, reduce poverty, and design relevant infrastructures and development models.

The implementation of scientific research and technological development projects in the field of energy systems engineering underlies industrial transformation, innovation, and global economic structure. Especially in the context of increasing tensions in the relationship between humans and nature, it is crucial for engineers and policymakers to adopt a balanced approach between economic progress, social justice, and environmental preservation, which is fundamental for a country's energy security.

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Lisbon March 4th 2024

UNESCO WFEO World Engineering Day 2024 "Engineering Solutions for a Sustainable World" Monday, 04 March

OPENING CEREMONY PROGRAM

8:30 | Registration

10:00-10:45 | Opening Ceremony

Eng. Mustafa Shehu, WFEO President, Nigeria
Prof. José Vieira, WFEO Immediate Past President, Portugal
Eng. Seng Chuan Tan, WFEO President-Elect, Singapore
Eng. Fernando Almeida Santos, President of Ordem dos Engenheiros, Portugal
Dr. Lidia Brito, Assistant Director General for Natural Sciences of UNESCO, France
Eng. Carlos Moedas, Mayor of Lisbon, Former European Commissioner for Research, Science and Innovation, Portugal
Prof. Elvira Fortunato, Minister of Science, Technology, and Higher Education, Portugal
Prof. Marcelo Rebelo de Sousa, President of the Republic of Portugal (tbc)

10:45-11:15 | Engineering for Sustainable Development

Prof. Sebastião Feyo de Azevedo, President of the Portuguese Academy of Engineering, Portugal

11:15 -11:45 | Break

11:45-12:00 | Global Engineering Capability Review (GECR) 2024

Eng. Shane McHugh and Eng. Wahid Azizi, Royal Academy of Engineering, United Kingdom

12:00-12:25 | Hackathon Awards Ceremony

Dr. Marlene Kanga, WFEO Past President, Australia

12:25-12:30 | Closing Ceremony

Prof. José Vieira, WFEO Immediate Past President, Portugal

12:30 -14:00 | Lunch

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Lisbon March 4th 2024

UNESCO WFEO World Engineering Day 2024
Monday, 04 March

CONFERENCE "ENERGY TRANSITION AND SUSTAINABILITY"

14:00 | Registration

14:30-14:45 | Opening remarks
Eng. Mustafa Shehu, WFEO President, Nigeria
Prof. José Vieira, WFEO Immediate Past President, Portugal

14:45-15:00 | The Role of the Engineers in the Energy Transition
Prof. Gong Ke, WFEO Past President, China

15:00-15:20 | Portugal and the Energy Transition: Some Vital Strategic Questions
Prof. Clemente Pedro Nunes, Professor IST, Portugal

15:20-15:40 | The Economic Sustainability of the Energy Transition
Eng. Luís Mira Amaral, Former Portuguese Minister of Industry and Energy, Portugal

15:40-16:00 | Enabling the Energy Transition: Infrastructure Requirements and Impacts on Economic Development. A case study from Sydney Australia
Dr. Marlene Kanga, WFEO Past President, Non-Executive Director, Endeavour Energy, Australia

16:00-16:30 | Break

16:30-16:50 | The challenges of renewable energy for sustainable agriculture regarding the SDGs of the 2030 Agenda
Eng. Ania López, WFEO Executive Vice-President, Consiglio Nazionale degli Ingegneri, Italy

16:50-17:10 | The Future of Nuclear Energy in Europe
Eng. Pedro Sampaio Nunes, Former Portuguese Secretary of State of Science and Innovation, Portugal

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17:10-17:30 | A Just Transition to Sustainable Energy and a Net-Zero Future in Emerging Markets: The Case of Africa
Eng. Martin Manuhwa, WFEO Committee in Engineering Capacity Building Chair and ZAIDG Consulting Engineers MD, Zimbabwe

17:30-17:50 | The Reinforcement of the Energy Interconnections and the Optimization of the Energy Markets in Europe
Eng. Marie-Line Vaiani, Secretary General, Conseil Français de l'Energie, France

17:50-18:00 | Closing Remarks
Eng. Seng Chuan Tan, WFEO President-Elect, Singapore

WFEO MEETINGS

WFEO Meetings on March 5th, 2024, at the Ordem dos Engenheiros' Headquarters (Lisboa) and Fenix Lisboa Hotel

March 5th MEETINGS (Location: Ordem dos Engenheiros Headquarters)

1. Finance Committee (closed)
2. Executive Board (closed)
3. All Committees Chairs
4. Nominations Committee
5. Governance Committee
6. Awards Committee
7. Strategic Planning Committee
8. Membership Committee
9. WFEO/UN Relations Committee
10. WED Committee
11. Africa Projects Committee
12. WFEO Executive Council (*Venue: Fenix Lisboa Hotel)

GALA DINNER

March 4th at Palácio da Rocha do Conde d'Óbidos

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PREFERRED HOTELS

HF Fénix Urban 4*

HF Fénix Lisboa 4*

HF Fénix Music 3*

10% discount at wed2024.hfhotels.com

MACRO AGENDA

Schedule	Sunday March 3rd	Monday March 4th
	Room Manuel Rocha Ordem dos Engenheiros	Auditorium Ordem dos Engenheiros
09h00 12h30		WED
12h30 14h00		**LUNCH**
14h00 18h00		CONFERENCE
19h30 22h30	**Welcome Cocktail WED** Ordem dos Engenheiros	**Gala Dinner WED** Palácio da Rocha do Conde d'Óbidos

Schedule	Tuesday March 5th		
	Room 1 Ordem dos Engenheiros	Room 2 Ordem dos Engenheiros	Room 3 Ordem dos Engenheiros
09h00 10h00	WFEO FINANCE COMMITTEE	WFEO NOMINATIONS COMMITTEE	WFEO ALL COMMITTEES CHAIRS
10h00 11h00	WFEO EXECUTIVE BOARD	WFEO AWARDS COMMITTEE	WFEO GOVERNANCE COMMITTEE
11h00 11h30	**COFFEE BREAK**		
11h30 12h30	WFEO/UN RELATIONS COMMITTEE	WFEO STRATEGIC PLANNING COMMITTEE	WFEO MEMBERSHIP COMMITTEE
12h30 13h30	**LUNCH**		
13h30 14h30	WFEO WED COMMITTEE		
14h30 15h30	WFEO AFRICA PROJECTS COMMITTEE		
16h00 18h00	**WFEO EXECUTIVE COUNCIL** Hotel Fénix Lisboa		
19h30 22h30	**WFEO Meetings' Dinner** Restaurant, 6th floor Ordem dos Engenheiros		

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