



Progress Meeting (M36)

Day 1 - Tuesday 15th November - IMP-PAN, Gdansk

09:00-9:45 **Project Coordination** - Sophia Buckingham & Maria Teresa Ramandi (VKI)

ESRs Presentations - Session 1 (15 min+ 5 min discussion)

Development of multi-physics simulation framework applied to urban wind turbine concepts

9:45 - 10:10 **High fidelity approaches for synthetic urban wind field generation**

Mohanad Elagamy (UPM) - Generation of spectral representations of urban wind fields from LES and experimental databases for aeroelastic simulations of wind turbines

10:10 - 10:40 **Public acceptance of urban wind energy**

Iryna Lunevich (WUR) - Reassembling urban low-carbon futures through wind energy imaginaries

10:40 - 11:00 Coffee Break

11:00 - 12:15 **Characterization of noise generated by Vertical-Axis WT concepts**

Kartik Venkatraman (VKI) - Wind energy in complex/urban environments

Shivangi Sachar (IMP-PAN) - Small VAWTs and HAWTs for municipal, low noise applications

Shubham Shubham (NTU) - Harvesting wind energy in complex urban environments - aerodynamic and aeroacoustic study of small-scale VAWTs

12:15 - 12:30 **Group Picture for the website**

12:30 - 14:00 Lunch Break

14:00 - 15:00 **Aerodynamic performance and noise emissions of building mounted WT concepts**

Manoel Guimares (TUD) - Aerodynamic and Aeroacoustic Optimization of Diffuser-Augmented Wind Turbines

Rui Goncalves (VKI/SISW) - Aerodynamic and aeroacoustics installation effects of building-integrated wind turbines

Erfan Farhikhteh (NTUA) - Adjoint-based aerodynamic and aeroacoustic shape optimization of roof- and ground-mounted HAWTs in the built environment

15:00 - 15:30 Coffee Break

15:30 - 17:00 **Status update on the definition of the benchmarks**

SGRE lead & participating ESRs - T5.1: Large onshore Wind Turbine

VKI lead & participating ESRs - T5.2: Complex terrain Perdigao

NTU lead and participating ESRs - T5.3: Urban canopy



Progress Meeting (M36)

Day 2 - Wednesday 16th November - IMP-PAN, Gdansk

ESRs Presentations - Session 2 (15 min + 5 min discussion)

Development of multi-physics simulation framework applied to rural wind turbine concepts

09:00 - 10:30	Cost-efficient methods for aeroacoustic simulations of wind turbine noise Andrea Piccolo (TUD/SISW) - Effect of inflow conditions on the source noise of large onshore wind turbines Laura Botero (UTW) - Fast turn-around methods for wind turbine noise assessment Andrea Bresciani (SISW/CSTB) - Low-order aeroacoustic simulation methods for wind turbine noise
10:30 - 11:00	Coffee Break
11:00 - 12:00	High-fidelity numerical simulation approaches Oscar Marino (UPM) - High order methods for generation and propagation of acoustics of wind turbines Baris Kale (VKI) - ABL simulations with uncertain weather parameters and impacts on WT performance and near-field noise
12:00 - 13:30	Lunch Break
13:30 - 14:00	Advanced flow/acoustic control technologies Nishchay Tiwari (IMP-PAN) - Improvement of model for vortex generator on wind turbine blade
14:00 - 14:30	Rotor aerodynamics Umberto Boatto (SISW) - Modeling of tip-losses in BEMT-based codes
14:30 - 15:00	Feedback from Advisory Board Members
15:00 - 15:30	Coffee Break
15:30 - 16:30	Presentation of ESRs' ideas on the demonstrator all ESRs
19:00	Dinner