
Minutes of 2019 Annual Meeting and Workshop in Montevideo, Uruguay, October 2019

Participants:

Gabriel Usera (UdelaR)

Timo Karlsson (VTT)

Andres Zappa (INTI)

Mariano Amadío (INTI)

Javier de la Cruz (INEEL). Online for the
meeting; present for the Workshop

Ferhat Bingol (IZTECH). Online

Lorand Szabo (UTCLUJ). Online

Alexeis Fernandez (INTEC). Online

Luis Cano (CIEMAT)

Ignacio Cruz (CIEMAT)

Luis Arribas (CIEMAT)

Francisco García Soto (CIEMAT). Online

Carolina G^aBarquero (CIEMAT). Online

SWTOMP annual meeting - Wednesday 9th October



SWTOMP annual meeting in Montevideo, Uruguay.

Although the meeting was initially planned for the whole day, due to some technical (audio connection) and spatial (time zone differences) difficulties, the extension of the meeting was reduced to summarize the update of the different Work Packages (WP), using the rest of the day to work locally in the WPs that have not finished yet.



During the morning session, all the partners were present, either on-site or on-line (except for INTEC from Dominican Republic, who could not manage to connect).

- **WP2: Development of methodology for evaluation of wind resources for SWT.** Ferhat Bingol. (IZTECH)

The presentation of the progress and status of this WP2 was based on a PPT file (can be accessed in this [link](#), in the Private Area of the SWTOMP web site). The work is nearly finished and a final report will be prepared. Two sites have been compared (in Turkey and Spain), together with 4 technical visits (Turkey).

The main conclusions are:

- Models are good enough for AEP calculations but not good enough to model obstacles.
- Small turbines get affected from local roughness significantly
- A simplified method on estimation of forest roughness by use of aerial LIDAR data

The presented work opened the initial scope, coping with other aspects like ice simulation and social acceptance from users.

- T. Karlsson (VTT) gave some commentary to the work on ice characterization that had been included in the presentation.
- G. Usera (UdelaR) shared some of the main remarks on the work they are carrying out with the simulation of the influence of a fence on the SWT performance.
- F. García Soto (CIEMAT) gave some brief comments on the work being carried out in CIEMAT to characterize a wind turbine on a building modelled with CFD and validated against measured data.
- L. Arribas (CIEMAT) suggested that some of the results from the interviews could be shared with WP1: Ferhat agreed to send these results.

- **WP0: Project Management.** Carolina García Barquero (CIEMAT)

- Planned Ending date of the Project for the different partners:
 - CIEMAT: May 1, 2020
 - UdelaR: May 1, 2020
 - VTT: End of 2019 (might be extended if there is some work left to be done)
 - IZTECH: December 1, 2019
 - UTCLUJ: December 1, 2019
 - INTI: May 1, 2020 (Uncertain, depending upon external decisions)
 - INEEL: June 1, 2020
 - INTEC: Finished (no active public support)

- Final Progress Report: all WP leaders will send a Progress Report (before they leave the Project), that will be used to prepare the Final Progress Report. Two days after the Consortium meeting in Montevideo, an ERA-Net communication arrived establishing December 1st as the deadline for such report, so all the WP leaders should send their reports by November 11th.
- Next Project annual meeting: it was not clear if this would be the last Project annual meeting or not, as there are different situations for the different partners. This point will be addressed in the future, when more clarity exists.

- **WP3: Optimization of SWT.** Andres Zappa (INTI)

- GENERATOR
 - L. Szabo (UTCLUJ) reported that they have already designed and optimized the hybrid synchronous generator prototype, which is under test. They have published several papers on the topics in journals and international conference proceedings, which will be sent to be shared in the private area of the SWTOMP web page (Documentos> WP3 Wind Turbines Optimization> Papers published by UTCLUJ).
 - In relation to the collaboration with INEEL for the vibration analysis of their generator in a Master Thesis work, it has not started yet, but might start in the next term.
- COLD CLIMATE
 - T. Karlsson (VTT) will prepare a report on the issues derived from the use of SWT in cold climates, such as the affections on batteries, power electronics, lubricants, etc.
- MEXICAN DESIGN
 - J. de la Cruz (INEEL) reported briefly on the Mexican design update, with more detailed information available in the corresponding presentation on the Workshop (available at the SWTOMP web site).
- ARGENTINIAN DESIGN
 - A. Zappa (INTI) used the PPT presentation summarizing the state of the SWTOMP Project prepared for the Workshop. However, a much more detailed presentation is available to illustrate on the advances of the Argentinian case, which include different issues, ranging from the interconnection to the grid via a commercial photovoltaic inverter, to the mechanical problems detected in the wind turbine during its testing (both presentations available at the SWTOMP web site, in the Montevideo Workshop page).



- **WP4: Standards.** Luis Cano and Ignacio Cruz (CIEMAT)

L. Cano commented on the actual status of standards and improving possibilities, also using the mentioned presentation of the SWTOMP Project update.

- **WP1: Promotion of the potential market.** Luis Arribas (CIEMAT)

A brief update, also using the Project summary presentation prepared for the Workshop (it is already available at the SWTOMP web page), was shared with the attendants.

After the review of all the WPs, C. García Barquero (CIEMAT) proceeded to open the floor for some final remarks and questions, closing finally the Consortium meeting.

Then, after a deserved coffee break, the partners attending the meeting in Montevideo, kept on working firstly on the WP3 and, after lunch, on the WP1. The corresponding summaries will be sent separately to the participating partners.

A final comment thanking: the Training Center of the Spanish Cooperation Agency in Montevideo; the CIEMAT's Training Unit staff, in particular Lara de Diego; and UdelaR, in particular Gabriel Usera, for their excellent work in the support both for the Workshop and for the SWTOMP annual meeting in Uruguay.

Workshop at the Training Center of the Spanish Cooperation Agency in Montevideo.

Thursday 10th October.

Between October 7 and 11, the seminar on "Mini-wind for self-consumption: Distributed and isolated wind systems" was held coordinated by the Centre for Energy, Environmental and Technological Research of Spain (CIEMAT) at the Training Centre of the Spanish Cooperation in Montevideo (CFCE Montevideo).

Within this seminar, the activities on Thursday October 10 were special, as it was shared with the Workshop organized under the umbrella of the ERANet-LAC project "Small Wind Turbines Optimization and Market Promotion" (SWTOMP). During this Workshop, SWTOMP project participants from Finland, Mexico, Argentina, Uruguay and Spain shared with attendees their activities in relation to the market, optimization, regulation, wind resource and regulation for small wind turbines.

The Workshop was attended by around 25 technicians both from the private and the public energy sector in Argentina, Uruguay, Bolivia, Colombia, El Salvador, Honduras, Mexico, Panama, Peru, the Dominican Republic and Spain, sharing their experience on planning and implementation of Small Wind technology projects.

The whole Workshop was conducted by L. Arribas, from CIEMAT. The agenda for the workshop can be found in Annex II, and the presentations can be accessed at the [SWTOMP web site](#).



SWTOMP Workshop in Montevideo, Uruguay.



ANNEX I:

2019 SWTOMP MEETING AGENDA



AGENDA
SWTOMP PROJECT
2019 Annual Consortium Meeting
Montevideo, Uruguay
October 9, 2019

Morning: Consortium Meeting

08:00 Welcome to the meeting
CIEMAT

08:15-08:30 WP0: Project Management
Lead by Luis Arribas/Carolina García Barquero (CIEMAT, Spain), and all the partners

08:30-09:30 WP2: Development of methodology for evaluation of wind resources for SWT
Lead by Ferhat Bingol (IZTECH, Turkey); and Gabriel Usera (UdelaR, Uruguay), Luis Cano, Francisco García Soto (CIEMAT, Spain), Javier de la Cruz (INEEL, México)

9:30-11:00 WP3: Optimization of SWT Session 1
Lead by Javier de la Cruz (INEEL, México); and Andrés Zappa and Mariano Amadio (INTI, Argentina), Timo Karlsson (VTT, Finland), Luis Arribas, Ignacio Cruz, Luis Cano (CIEMAT, Spain), and Lorand Szabo (UTLCUJ, Romania),

11:00-11:30 Coffee break

11:30-13:00 WP3: Optimization of SWT Session 2
Lead by Javier de la Cruz (INEEL, México); and Andrés Zappa and Mariano Amadio (INTI, Argentina), Timo Karlsson (VTT, Finland), Luis Arribas, Ignacio Cruz, Luis Cano (CIEMAT, Spain), and Lorand Szabo (UTLCUJ, Romania),

13:00-14:00 Lunch

Afternoon: Consortium meeting

14:00-15:00 WP1: Promotion of the potential market (part I)
- Task 1.1: Analysis of the market,
Led by Luis Arribas (CIEMAT, Spain); and Javier de la Cruz (INEEL, México), Andrés Zappa and Mariano Amadio (INTI, Argentina), Timo Karlsson (VTT, Finland), Alexis Fernández and Ernesto Fariñas (INTEC, Dominican Republic), Gabriel Usera (UdelaR, Uruguay)

15:00-16:00 WP1: Promotion of the potential market (part II).
- Task 1.3: Preparation of material for education,
Led by Gabriel Usera (UdelaR, Uruguay); and Luis Arribas (CIEMAT, Spain), Javier de la Cruz – INEEL (México), Andrés Zappa and Mariano Amadio (INTI, Argentina), Alexis Fernández and Ernesto Fariñas (INTEC, Dominican Republic)

16:00 – 16:30 WP4: Standards
Led by Ignacio Cruz- CIEMAT (Spain); and Andrés Zappa and Mariano Amadio (INTI, Argentina), Timo Karlsson (VTT, Finland), Javier de la Cruz (INEEL, México)

16:30 End of the meeting



ANNEX II: WORKSHOP AGENDA



PROGRAM

SWTOMP PROJECT - WORKSHOP

Training Center in Uruguay
Spanish Cooperation
Montevideo, October 10, 2019

Time	Conference	Speaker	Center	Country
09:00-09:30	Open ceremony - SWTOMP Project presentation	Luis Arribas	CIEMAT	Spain
09:30-10:00	Resource characterization for SWT	Gabriel Usera	UdelaR	Uruguay
10:00-10:30	SWT in urban environment	Ignacio Cruz	CIEMAT	Spain
10:30-11:00	Technology optimization for SWT: generator and power electronics	Javier de la Cruz	INEEL	Mexico
11:00-11:30	Coffee - break			
11:30-12:00	Testing SWT	Mariano Amadío	INTI	Argentina
12:00-12:30	Technology optimization for SWT: mechanical system	Andrés Zappa	INTI	Argentina
12:30-13:00	Cold climate considerations for SWT	Timo Karlsson	VTT	Finland
13:00-13:30	Development of Educational Material for SWT	Gabriel Usera	UdelaR	Uruguay
13:30-14:30	Lunch break			
14:30-15:00	Experiences on regulation for SWT	Javier de la Cruz	INEEL	Mexico
15:00-15:30	SWT standards	Luis Cano	CIEMAT	Spain
15:30-16:00	SWT Market overview	Luis Arribas	CIEMAT	Spain

