

# Experiences in the process of the implementation of SWH Standards in Uruguay

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QUALITY INFRASTRUCTURE FOR RENEWABLE ENERGY SOURCES AND ENERGY  
EFFICIENCY IN LATIN AMERICA AND THE CARIBBEAN

- 1 Regulatory and standardization framework
- 2 Efficiency Laboratory for SWH
- 3 Solar Energy Laboratory

## ENERGY EFFICIENCY PROJECT – 2005-2011

### Efficient Energy Use Law N° 18.597

(September, 2009)



It establishes the promotion of efficient energy use, defining a National Energy Efficiency Plan and creating a National System of Energy Efficiency Labeling.

### Solar Law N° 15.895 (September 2009)

It declares of national interest the research, development and training in the use of Solar Thermal Energy.

### SOLAR PLAN (March 2012)

The Solar Plan allows users of the residential sector purchase equipment of solar thermal energy in an accessible and widespread way.

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# UNIT STANDARDS

Code	Base Document	Scope	Type
UNIT-ISO 9488	ISO 9488	-----	Vocabulary
<b>SOLAR COLLECTORS</b>			
UNIT 705	EN 12975-1	Component	Requirements
UNIT-ISO 9806-1	ISO 9806-1	Component	Test methods
UNIT-ISO 9806-2	ISO 9806-2	Component	Test methods
UNIT-ISO 9806-3	ISO 9806-3	Component	Test methods
<b>FACTORY MADE SYSTEMS</b>			
UNIT 1185	EN 12976-1	System	Requirements
UNIT 1184	EN 12976-2	System	Test methods
UNIT-ISO 9459-2	ISO 9459-2	-----	Test methods
<b>CUSTOM BUILT SYSTEMS</b>			
UNIT 1195	EN 12977-1	System	Requirements
UNIT 1196	EN 12977-2	System	Test methods

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## PRESENT SITUATION ON SWH TESTING

### Present situation:

- Qualification test facility: start operation in 2 months.
- Efficiency test facility: pending agreement for funding.
- Research efficiency test facility at the Faculty of Engineering.
  - First experience in flat plate collector's test.
  - Key capabilities were trained.

### Medium-term planification:

- Laboratorio Tecnológico del Uruguay (LATU):
  - In charge of qualification test procedures.
- Solar Energy Laboratory, Uruguay:
  - In charge of efficiency test procedures.
  - LATU's designated center for SWH efficiency.

**Early stage on implementing SWH testing methods**



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## EFFICIENCY LABORATORY FOR SWH

### Project overview:

- Agreement between: National Energy Office, National Corporation for Development and Solar Energy Laboratory.



- Is going to be located at the Solar Energy Laboratory.
- Expected: 2 outdoor set-ups for solar collectors.  
2 outdoor set-ups for solar-only systems.
- Competence accreditation through UNIT-ISO/IEC 17025.

### Team and capabilities:

- Solar Energy Laboratory: R. Alonso Suárez and I. Texeira.
- Faculty of Engineering: P. Curto.
- National Energy Office: J. C. Martínez Escribano.
- Centro Nacional de Energías Renovables (CENER, Spain).
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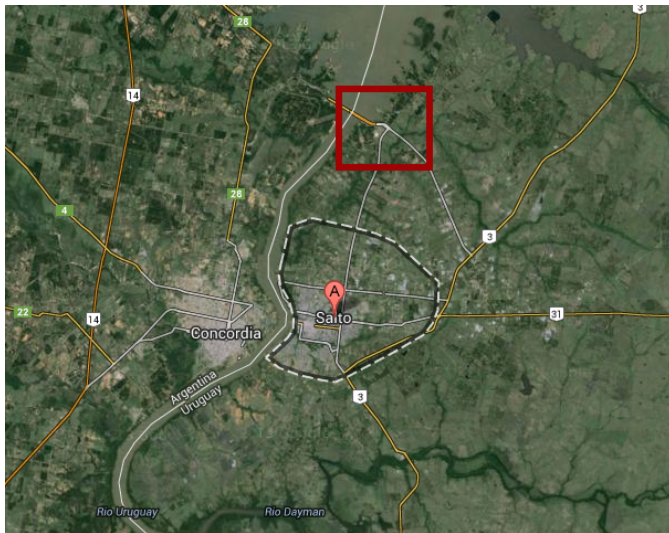
# SOLAR ENERGY LABORATORY IN URUGUAY (LES/UDELAR)

Where? Salto, Uruguay.



# SOLAR ENERGY LABORATORY IN URUGUAY (LES/UDELAR)

Where? Next to the Uruguay-Argentina's dam at Salto Grande.



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# SOLAR ENERGY LABORATORY (LES/UDELAR)

## Background:

- Project funded by the national public University (UdelaR) and supported by the National Energy Office.
- Proposed by: Dr. G. Abal and Eng. R. Alonso Suárez.
- **Mission:** a research laboratory on solar resource assessment and solar thermal technologies with special focus in Uruguay.
- **Vision:** become a national reference laboratory on solar energy resource assessment and thermal applications.

## Projected services:

- Calibration laboratory for pyranometers.
- Efficiency laboratory for domestic SWH.
- Solar measurement station of the Baseline Solar Radiation Network (BSRN point).



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# Thank you

# Questions?

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