

On May 20, the World Metrology Day is celebrated to commemorate the anniversary of the signing of the Metre Convention in 1875. This treaty is the basis of a measurement system consistent throughout the world.

The theme for 2014 is the *measurements and the global energy challenge*.

The world is facing a growing global energy challenge in the coming decades. The essence of the problem is the rising demand for energy, particularly in emerging countries, along with the need to limit or reduce greenhouse gases. Additionally, the desire for diversity and security of supply and increasing costs for fossil fuels, and we see that the trend is a greater mix of energy sources, including renewables. Diversification, coupled with the demand for improvements in the efficiency of power generation, transmission and use, means that the technology is constantly being pushed to the limit.

To meet the challenge we have to improve our ability to measure a variety of parameters. For example, the most accurate measurement of the temperature of manufacture or shape of the surface of a turbine blade will allow improvements in efficiency. Energy measurements for quality will help improve the stability of the transmission network, which today must also deal with input variables of wind turbines and photovoltaic cells, etc.. More complex power measurement to ensure that the energy we buy, sell or even perhaps, is correct is required. Worldwide, national metrology institutes continuously advance in the science of measurement through development and the validation of new measurement techniques at any level of sophistication is needed. Also participating in the comparisons coordinated by the International Bureau of Weights and Measures (BIPM) to ensure the reliability of the measurement results worldwide.

Many meters are controlled by law or are subject to regulatory control, for example, the scales used to weigh goods in a shop, tools for measuring environmental pollution, meters used for billing or energy. The International Organization of Legal Metrology (OIML) develops recommendations, which aims to adapt and harmonize requirements for such instruments worldwide.

For this celebration, the National Metrology Centre organizes Open Day (DPA), where guided tours of the facilities to briefly display CENAM scientific and technological developments offered by each measurement laboratory visits will be offered.

World Metrology Day celebrates and recognizes the contribution of people who work in intergovernmental and national organizations during the year for the benefit of all. Further information at: [www.worldmetrologyday.org](http://www.worldmetrologyday.org)

## **Program**

On this occasion, together with the twentieth anniversary, CENAM offer visits to laboratories measuring basic Metrology conference, corporate video projection, check the tree of Newton, display measurement standards and access to the Library of CENAM.

### **Activities May 19**

The CENAM invites people working in the industry to attend our facilities and participate free of charge in basic Metrology talks, visits to our laboratories, institutional video projection, check the tree of Newton, visits CENAM library and contact some suppliers measuring equipment for the industry.

### **Activities May 20**

The CENAM invites schools and institutions and society in general to attend our facilities and participate free of charge in basic Metrology talks, visits to our laboratories, see institutional video projection, check the tree and Newton facilities meet the Library of CENAM.

The central theme of the Open Day is "Measurements and global energy challenge"

### **Note Open Day 2013**

<http://www.cenam.mx/boletin/bolmayo2013.aspx>

### **Some discussions of the Open Day 2013**

- Papers in pdf format
- Benefits of Metrology
- Role of Secondary Laboratories
- The statistics in daily life
- Does Size Matter? Materials Metrology

### **Register to event**

For a more comfortable and productive visit will schedule three shifts beginning at 10h00, 12h45 and 15h30 each shift lasts approximately 1.5 hours. <http://www.cenam.mx/pabiertas/registro>

### **More information**

Please send an email to the account [servicios\\_evaluacion@cenam.mx](mailto:servicios_evaluacion@cenam.mx) indicating the information required.

### **Images of the previous event (See Spanish text)**