

- 1) Among the several factors that influence the energy consumption of a facility (residential and commercial), climate plays a unique and significant role. Weather has a direct impact on the variations of energy use for heating, ventilation and cooling systems.
- 2) Understanding and estimating the impact of weather on the long-term performance of a facility will support policy and decision making for better responding to climate change in terms of balancing supply and demand. Additionally, taking into account interannual variations can improve the evaluation of risks in energy efficiency investments for new and existing infrastructure because we can take into account the entire lifecycle and cost savings.
- 3) Such analysis relies on accurate and reliable weather data: observations and simulations data seamlessly from the past to future.
- 4) The World Meteorological Organization has launched the Global Framework for Climate Services that builds on the expertise of WMO as the authoritative UN agency for weather water and climate. WMO is putting together in one information system the weather and climate data (climatology, reanalysis, forecasts and projections) for supporting energy efficiency, renewable energy, adaptation and mitigation.
- 5) WMO would like to engage with potential users of this data and information in order to provide scientific and technical advice on how to select and use the data, and how gaps in knowledge can be addressed by new research
- 6) Through better understanding of which building technologies and system designs are more sensitive to yearly weather variation, building designers, owners, operators, and policy makers can make more informed decisions on energy efficiency implementations to reduce peak electricity demand and building energy use
- 7) Weather data influence behavior of energy consumer
- 8) Renewable energy, if used for energy efficiency, depends on weather and climate