

# WMO Study Group on Integrated Energy Services (SG-ENE)



**Best Practices for :**

**Integrated Weather and Climate Services in Support to Net Zero Energy Transition**

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# WMO Study Group on Integrated Energy Services

- WMO Study Group on Integrated Energy Services (SG-ENE) was established in April 2020 by the Technical Commission SERCOM
- First meeting in December 2020- So far 6 meetings
- Composed of 16 experts in Energy and Meteorology (gender and geographical balance)
- [Webpage and link to all the meetings reports and documents](#)



Members of the WMO Study Group on Integrated Energy Services, 6th meeting (hybrid), Geneva, Switzerland, August 2022

# WMO SG-ENE Upcoming Publication: General information

Integrated weather & climate services in support to net zero energy transition



Guidelines of the  
WMO Commission for Weather, Climate, Water and  
Related Environmental Services and Applications  
Study Group on Integrated Energy Services  
2022



Contributions from nearly  
50 authors



7 chapters, 14 case  
studies, 200 pages



Ten  
Recommendations



Will be Launched at  
COP27

# WMO SG-ENE Upcoming Publication: Objectives and Structure

## Objectives

To review current state of knowledge on weather and climate services value chains in the energy industry;

To benchmark best practices and identify knowledge gaps and barriers to the uptake of these services;

To describe implementation approaches, including business models, public-private-academic partnerships and capacity development programmes to assist with the deployment of these services.

## Chapters

**Ch1.** Weather and Climate Services in the context of the global Energy transformation

**Ch2.** Weather & climate information production

**Ch3.** Energy conversion models and forecasting

**Ch4.** Delivering weather & climate services through co-production approaches

**Ch5.** Supporting the uptake of weather and climate services for the energy sector

**Ch6.** Capacity building for weather and climate services in support of the energy transition

**Ch7.** Concluding remarks and Recommendations

# WMO SG-ENE Upcoming Publication: Case studies

## List of included case studies

Integrated weather services for offshore wind power production, **China**

Smart Energy Online – Energy Saving Service using Location-specific Weather Forecast Information in **Hong Kong**

Dry winters in northern Italy and energy generation, **Italy**

Short-range solar radiation forecasting product, **Southern Africa**

Application of Automatic Regional Weather Forecast in Short-term Load Forecast, **Hong Kong**

Heat waves in southern Europe and the implications for energy generation and demand, **Southern Europe**

Innovative Predictive Control System for Air Conditioning at Hong Kong International Airport, **Hong Kong**

Stakeholder Engagement and Gap Analysis performed by the C3S European Climatic Energy Mixes (ECEM) project

Pursuing Data Product Co-Production and Co-Development through NASA Applications Programs, **USA**

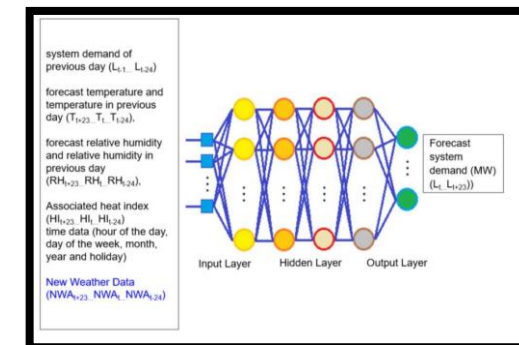
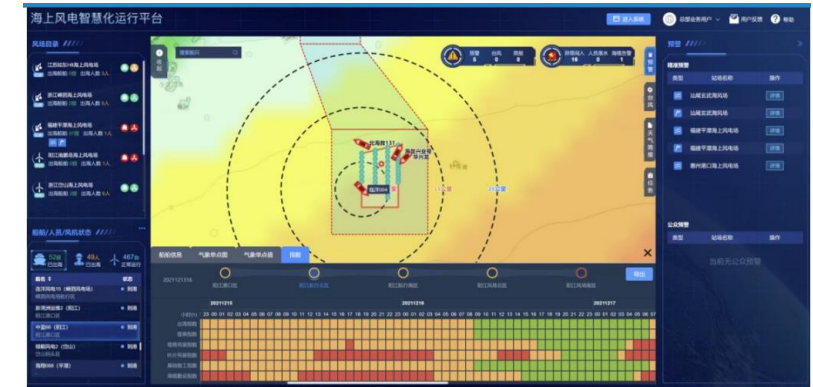
Economic assessment of power transmission lines modernisation accounting for risk extreme weather events, **Russia**

Early weather warnings to safeguard electricity supply, **Beijing**

Weather and Climate Services for energy trading, **Croatia**

Supporting uptake of renewables, **Costa Rica**

Supporting the uptake of a hybrid renewable energy systems, **South Africa**



# WMO SG-ENE Upcoming Publication: **Recommendations**



WORLD  
METEOROLOGICAL  
ORGANIZATION

**01**

**Recommendation 1:**  
**Improve mapping of users' requirements**

**02**

**Recommendation 2:**  
**Improve the science and technology supporting W&CSs**

**03**

**Recommendation 3:**  
**Improve post-processing methods and energy conversion models**

**04**

**Recommendation 4:**  
**Improve data access, exchange and policy**

**05**

**Recommendation 5:**  
**Refine co-production approaches, including data visualisation**

**06**

**Recommendation 6:**  
**Explore new energy sector applications using weather and climate services**

**07**

**Recommendation 7:**  
**Refine business models for sustainable W&CSs**

**08**

**Recommendation 8:**  
**Implement capacity building activities**

**09**

**Recommendation 9:**  
**Enhance communication activities**

**10**

**Recommendation 10:**  
**Strengthen, and create new, collaborations across organisations and sectors**

# Thank you!

For any question, please contact

**Roberta Boscolo ([rboscolo@wmo.int](mailto:rboscolo@wmo.int)) or Hamid Bastani ([hbastani@wmo.int](mailto:hbastani@wmo.int))**

WMO secretariat of the WMO Study Group on Integrated Energy Services