

# NORDIC HYDROPOWER – A RECHARGEABLE BATTERY FOR EUROPE?

CHRISTIAN RYNNING-TØNNESEN, CEO STATKRAFT  
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No. **1** WITHIN RENEWABLES  
IN EUROPE

**89%** RENEWABLE  
ENERGY

**277** POWER AND DISTRICT  
HEATING PLANTS

**33%** OF NORWAY'S  
POWER  
GENERATION

**3200** EMPLOYEES..  
**20** COUNTRIES

COSTA RICA

PERU

CHILE

BRAZIL

NORWAY

SWEDEN

FINLAND

THE NETHERLANDS

BELGIUM

GERMANY

UNITED  
KINGDOM

ROMANIA

FRANCE

BULGARIA

ALBANIA

TURKEY

SERBIA

NEPAL

LAOS

VIETNAM

INDIA

THAILAND

SRI LANKA

SINGAPORE

THE PHILIPPINES

# STATKRAFT IN SWEDEN

**NO. 4**

POWER PRODUCTION  
IN SWEDEN

**55**

HYDRO POWER  
PLANTS

**5**

DISTRICT HEATING  
PLANTS

**5.4 TWh**

ANNUAL POWER  
PRODUCTION

TRADING AND ORIGATION OFFICE  
IN STOCKHOLM



# STRATEGY



## Flexible generation and market operations

- Hydropower and gas-fired power in North West Europe (incl. France), and small-scale hydro in Norway
- Energy management and market operations



## International hydropower

- Hydropower development in Turkey and Albania
- SN Power in South America and Asia



## Wind power

- Onshore wind power in Norway and Sweden, consolidate UK portfolio
- Offshore wind power in UK, incl. Dogger Bank to concession



## District heating



## Regional companies

# STATKRAFT'S WIND POWER PLANS

## ⇒ NORWAY

- In operation: 245 MW
- Under development: ~2500 MW  
(Statkraft Agder Energi Vind)

## ⇒ THE UK

- In operation: 23 MW
- Under construction: 317 MW (50%)
- Under development: ~9000 MW (25%)  
(Industrial partnership)

## ⇒ SWEDEN

- Under construction: 10 MW
- Under development: ~1700 MW  
(Industrial partnership)

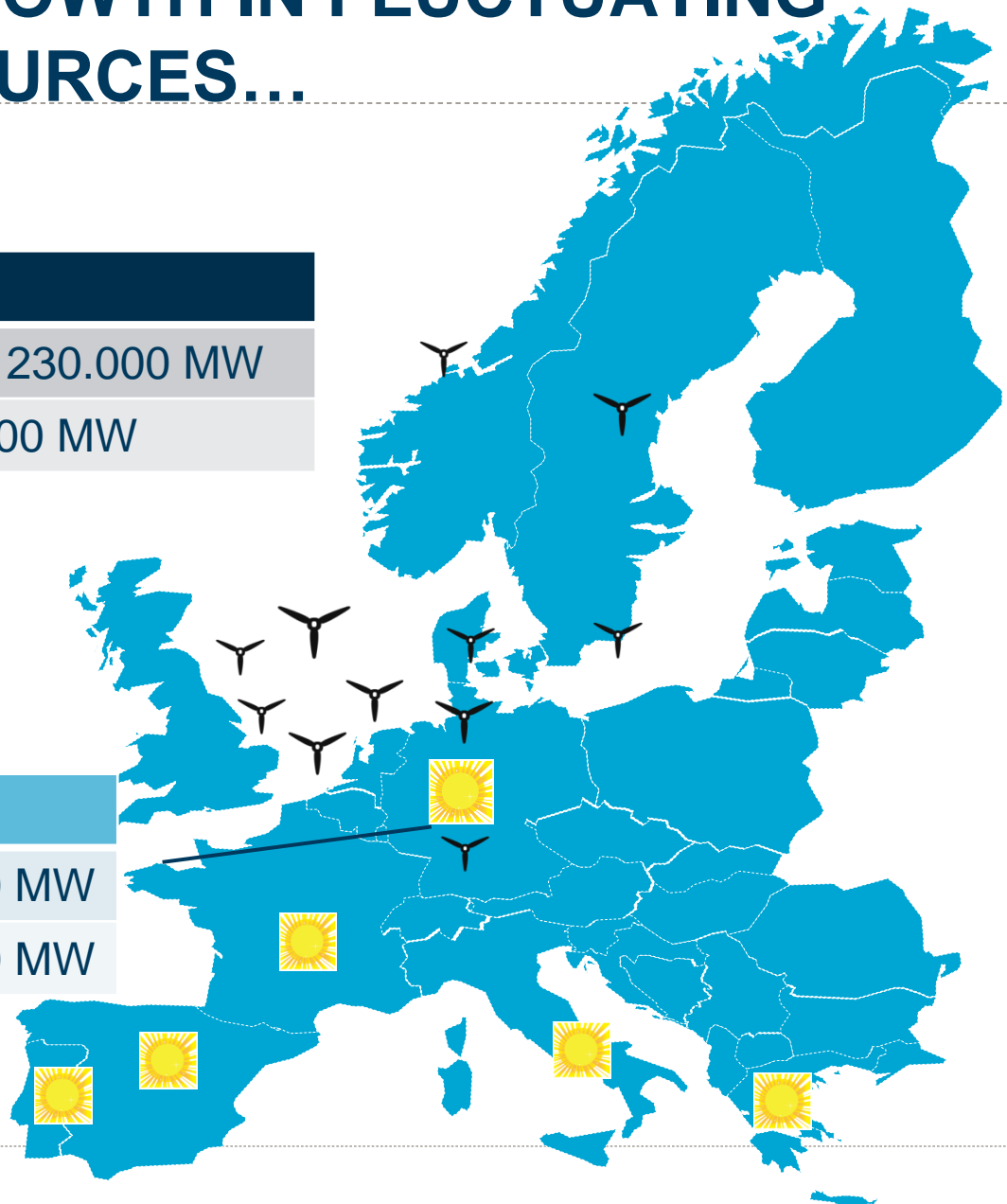




# STRONG GROWTH IN FLUCTUATING ENERGY SOURCES...

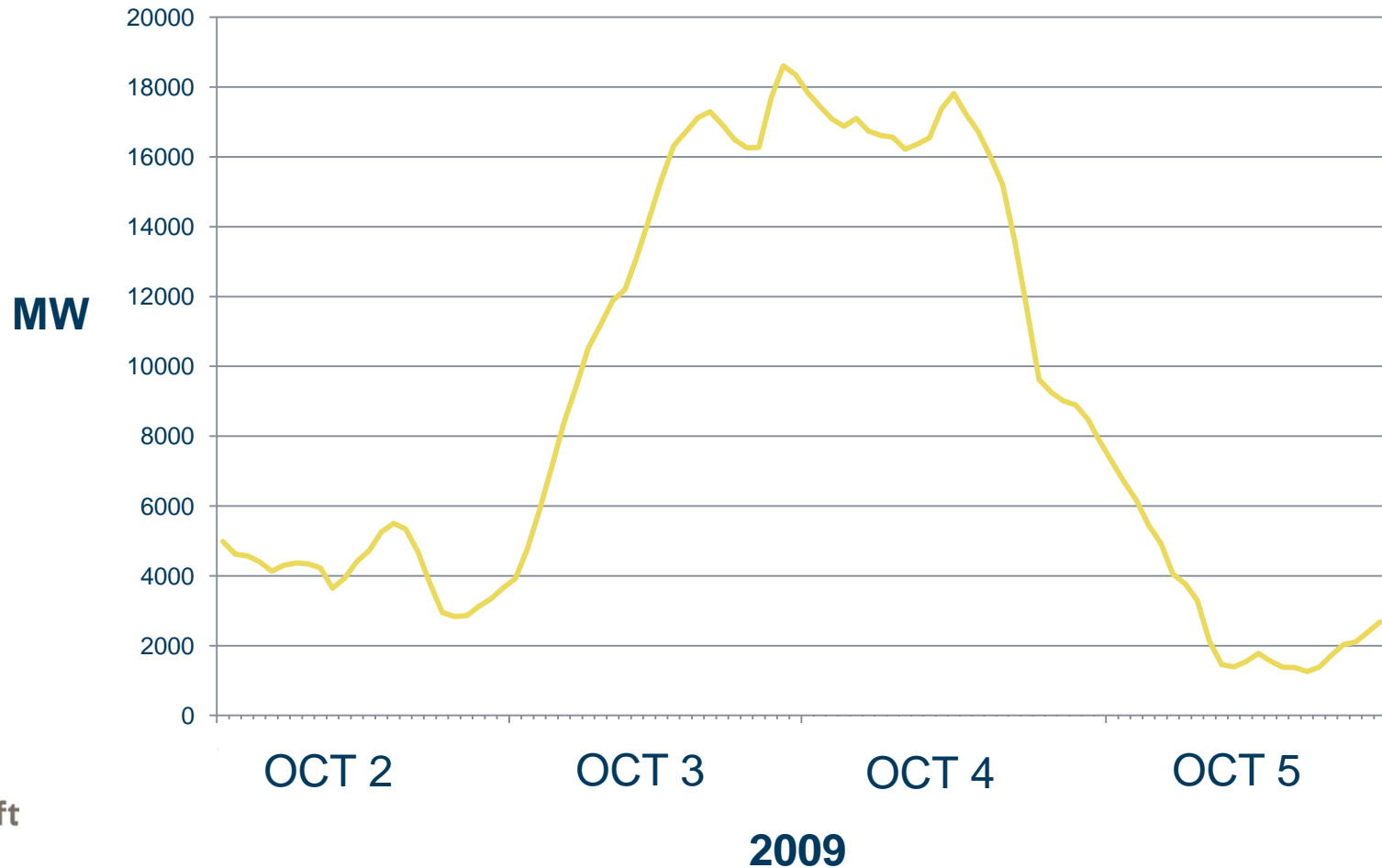
	2009	2020
Wind	76.000 MW	180 – 230.000 MW
PV	16.000 MW	150.000 MW

Germany	2009	2020
Wind	26.000 MW	46.000 MW
PV	10.000 MW	52.000 MW



# ...THAT NEEDS BALANCING

## WIND POWER PRODUCTION, GERMANY, OCT 2009





# **NORDIC HYDROPOWER A RECHARGEABLE BATTERY FOR EUROPE?**





# SUMMING UP

- ❑ **Balancing large scale integration of fluctuating wind and solar power will be a major challenge in Europe**
- ❑ **Further development of flexible hydropower could be a part of the solution**
- ❑ **To succeed, public acceptance in the Nordic Region and Europe is crucial..**
- ❑ **..and sufficient development of interconnections must be facilitated**

# PURE ENERGY

