



## Societal Challenge nr.3: *Energy*

**Big Data Focus area:** Real-time turbine monitoring stream processing and analytics

**BDE2020 domain partners:**



**KAPE  
CRES**

CENTRE FOR RENEWABLE  
ENERGY SOURCES AND SAVING



NATIONAL CENTER  
FOR SCIENTIFIC  
RESEARCH "DEMOKRITOS"

**Selected Key Data assets:** European Energy Exchange Data, smart meter sensor data, gas/fuels market/price data, consumption statistics, stratigraphic model data (geology, geophysics)

### **Pilot 3:**

Operation, maintenance and production forecasting for wind turbines on real-time sensor data.

Reasons:

- ⊙ Current technology is not able to deal with full amount of available valuable data
- ⊙ Economic benefit of predicting output and prevention of damage (if one can predict one part about to fail it can be prevented that other parts get damaged)
- ⊙ Large continuous stream of sensor data, perfect to test our platform

### **BDE infrastructure functionality:**

- Large scale RDF reasoning over 3 billion+ triples via 4Store
- RESTful API via [Puelia](#)
- Various [front ends](#)

