#IRENAinnovation

IRENA
International Renewable Energy Agency

# IRENA INNOVATION WEEK

## The Age of Renewable Power

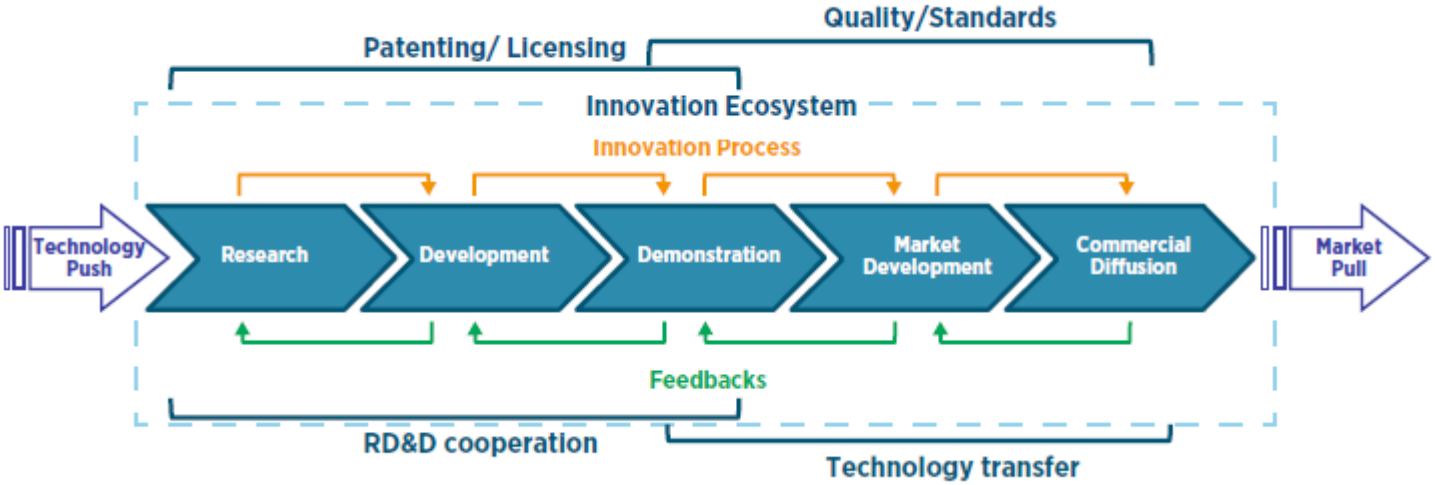
## Deep-dive Session 3
## From Science to Innovation: The Role of Patents

**11 – 13 MAY 2016 • BONN, GERMANY**

# The case for innovation

- The world needs to decarbonize its energy system by 2050
- Technical solutions need to be in place by 2030 to allow a transition by 2050
- RD&D needs to start now to have these solutions in place by 2030
- Market signals alone will NOT suffice
  - RE alternatives are needed for all markets
  - RE cost should fall below fossil cost
  - Externalities must be internalized in the prices and fossil fuel subsidies are reduced
- Innovation covers more than technology
  - Business model and policy framework innovation

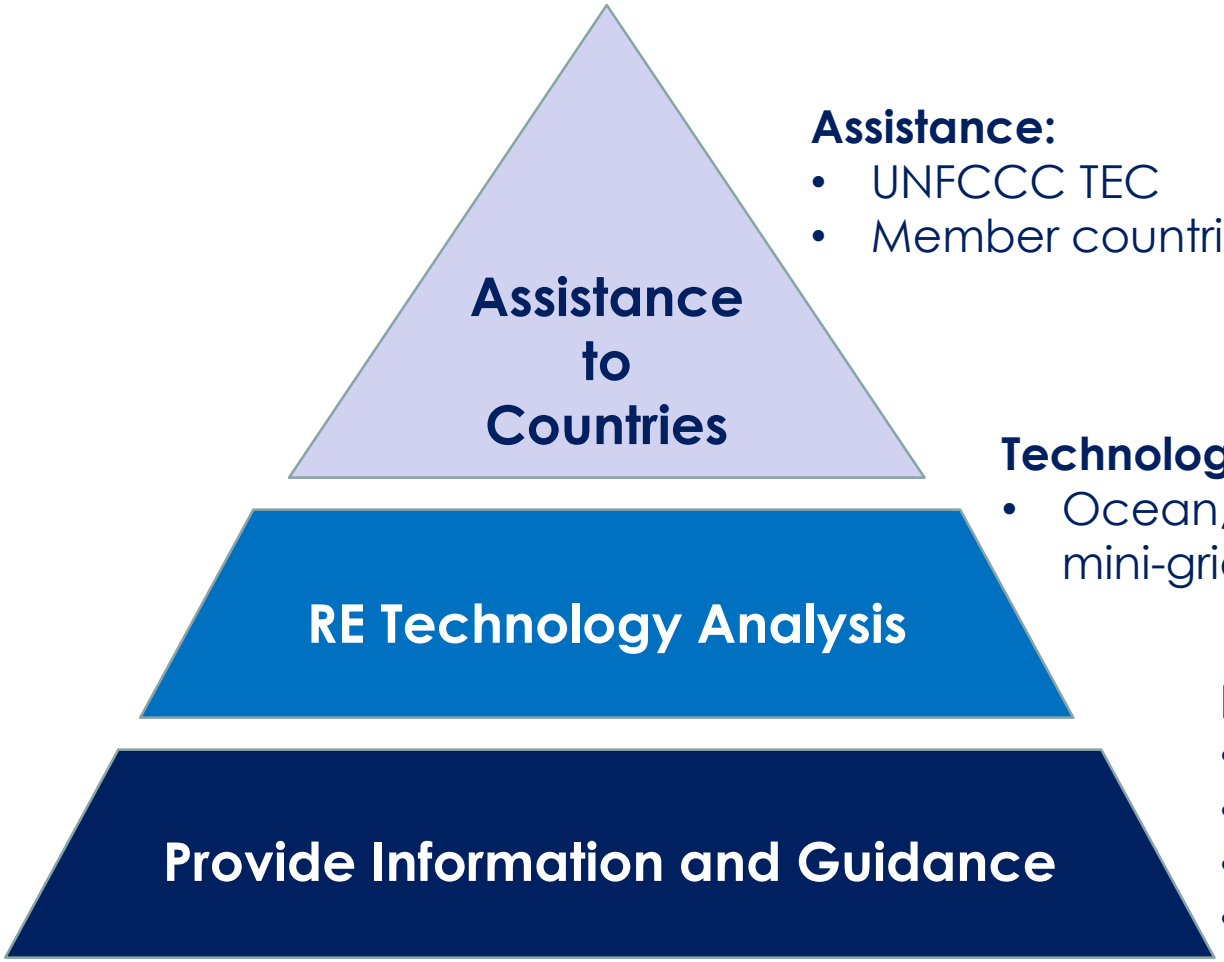
# Policy frameworks for innovation in RET




## Innovation policy frameworks for RET:

| | | |
|---|---|---|
| Should cover the complete technology life cycle – from technology push up to market pull | No limited to technology transfer but enabling technology trading and deployment | Governments to support higher risk basic R&D and industry to adopt and improve innovative technology via applied R&D |
| Early stages require strong R&D cooperative networks and balanced IP | Later stages to use standardization and quality control to pull best-available technologies and practices; transfer knowledge and technology | Market instruments are crucial for scale-up |

# IRENA activities in Innovation for RET




**Assistance:**
- UNFCCC TEC
- Member countries

**Technology outlooks:**
- Ocean, advanced biofuels, mini-grids, offshore wind

**Policy analysis on:**
- RET policy frameworks
- IPR
- Cooperative R&D
- Technology Transfer

# Patents and RET innovation

**Support and monitor RET innovation:**

- Basic role - temporary and geographically limited exclusive rights
- Aim to incentivize innovation through protection of investments and inventions
- Allow technology investors to capture the value of inventions
- Patent information is public - source of technology knowledge
- Patents can be analysed to identify RD&D trends

**Limitations:**

- Licensing information may not always be available
- Not all inventions are patented.
- Not all patents have the same relevance and value.
- Usefulness of certain patents in innovation is not self-evident
- That many patents are filed does not guarantee that a key technology will be successful in the market
- Assure the quality of patents is a challenge

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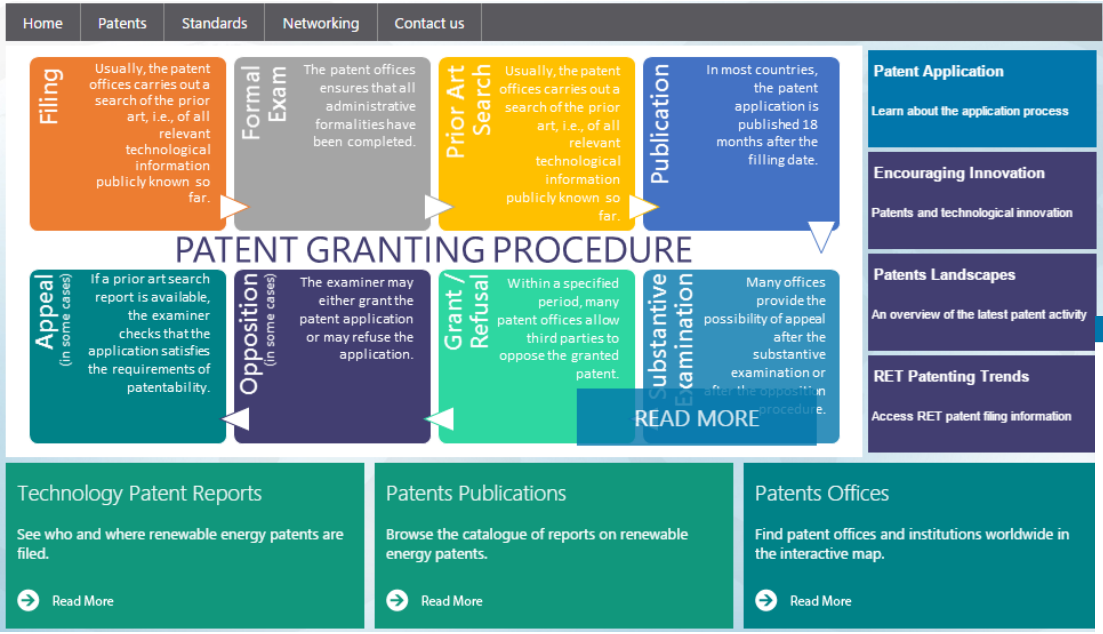
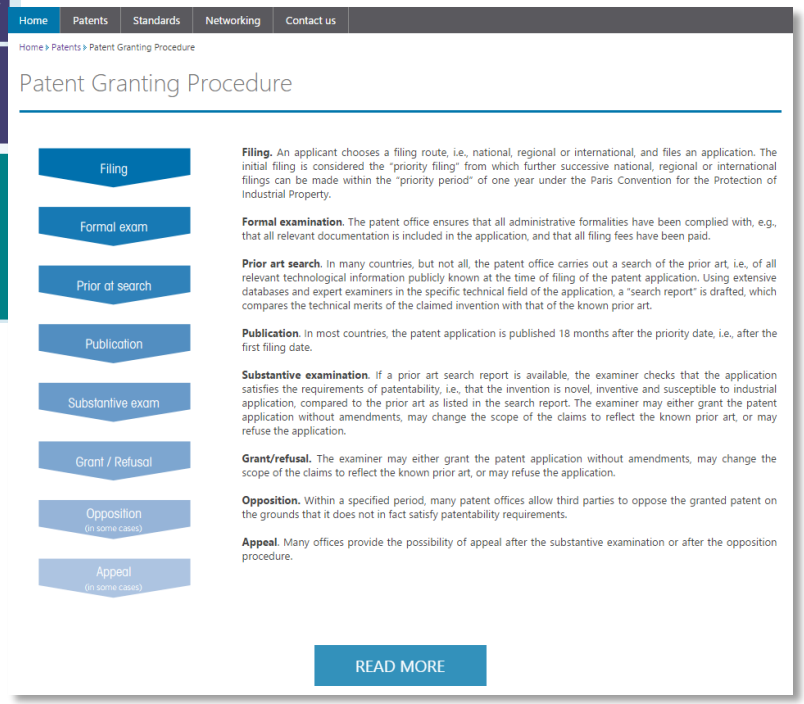
# INSPIRE platform

## Awareness & Learning

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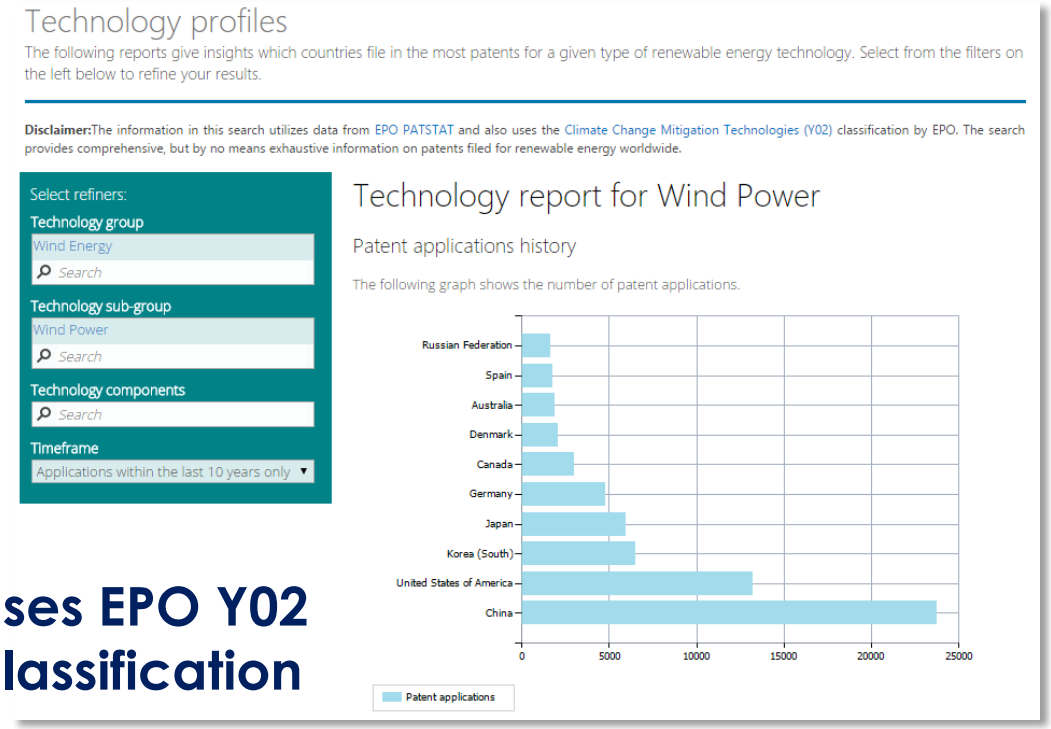
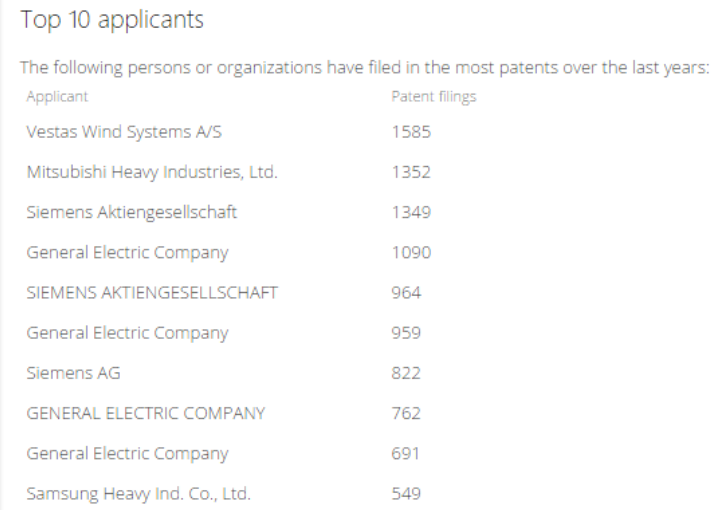
# www.irena.org/inspire

## Tool for patent analysis

Do you know which countries are most active in developing patents for renewable energy?

…and who are the most active applicants filing patents for wind energy over the last 10 years?




**Uses EPO Y02 classification**

# Thank you

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