# Patents Strategy:

Disruption In The Energy and Utilities Industry Through a Patent Lens

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# **Last Decade Development**



#### Lower production price >> higher availability

- Distributed renewable energy
- Solar and wind in particular

#### **Energy Storage**

• Groundbreaking options to save the produced energy





#### The rise of energy prosumers

Consumers can produce income from the excess energy they generate

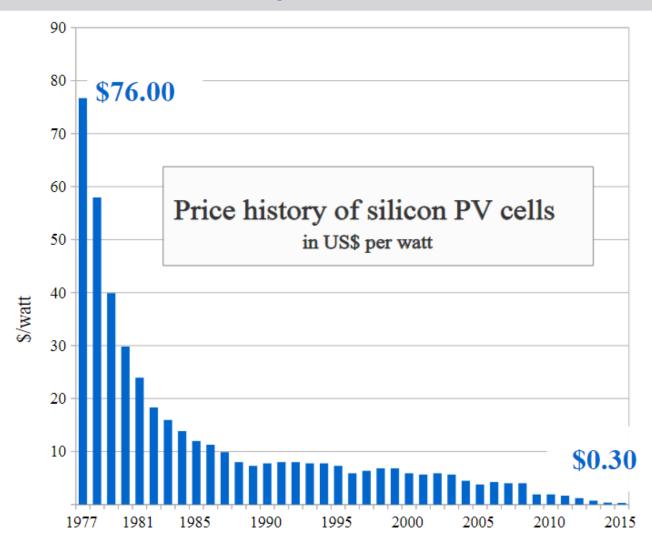
Smart grids





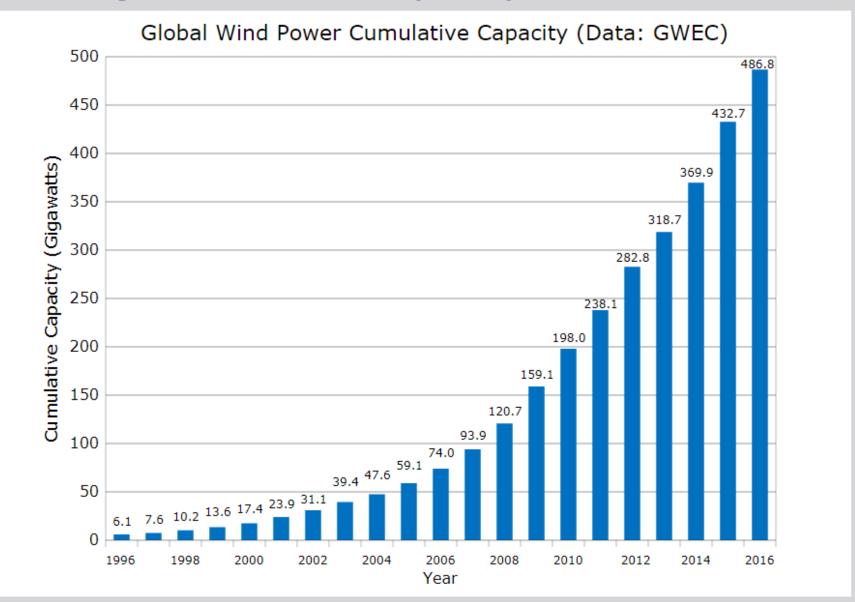
**Fuel cells** 

# **Price Cut In Electricity Production**



Source: Bloomberg New Energy Finance & pv.energytrend.com

# **Growing Wind Power Capacity**



<sup>4 |</sup> This document contains confidential information; This presentation and its content are not to be construed as legal advice

# Active markets – solar energy

## Geographic distribution of production

 While main production was initiated in the US, today production is mainly led by Chinese production

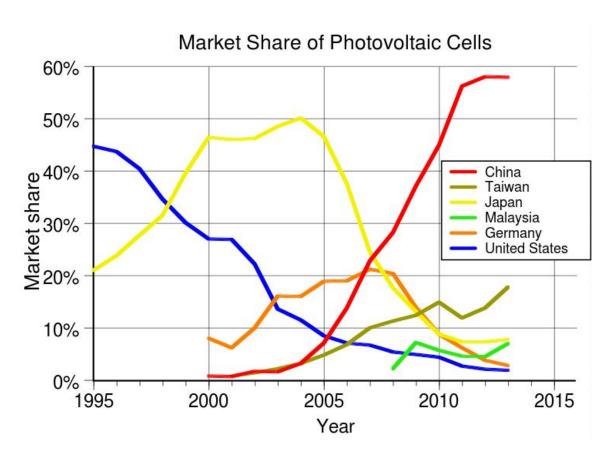
## Governments' support

 The market for solar energy production is growing world-wide, backed up by governments aiming to rely on renewable sources of energy instead of fossil fuels

## Top 5 markets

Germany, China, Japan, Italy and USA

# Active markets – solar energy



Source: Tomkiewicz, Energy and sustainability, from the point of view of environmental physics, MRS Energy & Sustainability--A Review Journal 2 · January 2015

## **IP Strategy: basic foundations**

#### **Costs of patent protection**

- Initial costs for building the fence and the ammunition
- Enforcement costs, i.e., patent litigation, are significant

#### Where should we file patents?

- Where is the \$\$\$? What are the key markets?
- Where are my competitors?
- Where are the manufacturers?
- Where are my key employees? R&D sites?

#### Patents, copyrights or trade secrets?

- Protecting know-how which cannot be patented or cannot be discovered (e.g., manufacturing processes, etc.) with trade secrets
- Undiscoverable inventions to patent or not?
- In some cases copyright protection is the only feasible protection

## IP Strategy: disruptors vs. incumbents

## **Competition**

 Utilizing company R&D to create patent portfolio in order to keep competitive advantage

#### **Defensive vs. Offensive**

• Protect the key differentiators vs. block competitors' direction

## Think global

- Robust patent protection in the US, EU, China and Japan
- *Success* oriented protection in developing countries (e.g., North Africa)

# Additional considerations when defining an IP strategy

### **Research Partnerships (tech transfer)**

• Ownership or licensing the IP generated from partnerships with universities and research programs

## **Components & Collaborations**

• Patenting the complete module as opposed to patenting the manufactured units (e.g., solar cell, fuel cell)

#### **Standards**

- Check the IP policy of the standard bodies you participate in
- Smart meters, IOT, and autonomous cars influenced by standardization activities
- SEP Standard Essential Patents / FRAND terms

# Thank You!

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