The RESILIENCE Climate Service

Predicting Renewable Power over Future Monthly to Decadal Timescales

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Francisco Doblas-Reyes, Verónica Torralba Fernandez, Aida Pintó Biescas, Nube Gonzalez-Reviriego







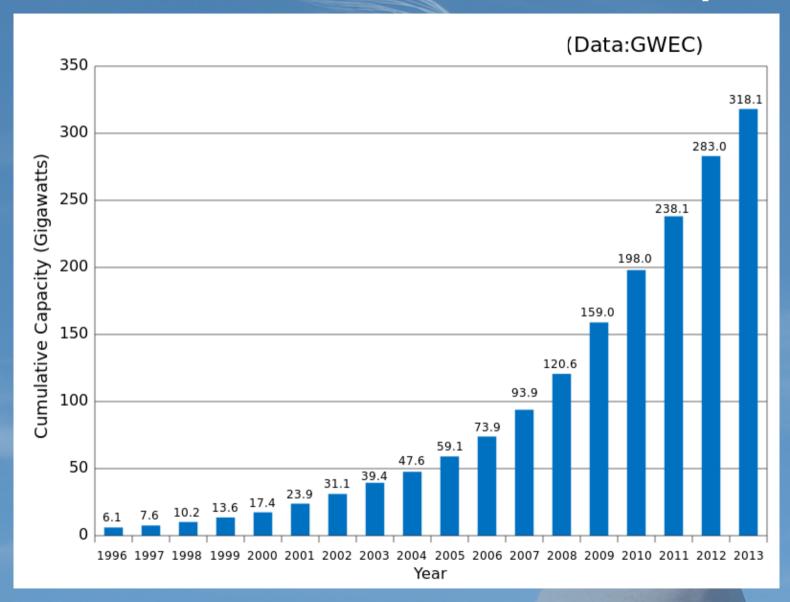
"The development of any business requires the ability to predict market movements over which it operates."

Ignacio Lainez Aracama, Professor of Wind Energy, EOI and Director of Energy Assessments, EDP Renewables. El País Article: 4th March 2014: Mix energético: las renovables y su predictibilidad





Worldwide Installed Wind Power Capacity







RESILIENCE OPPORTUNITY

Improve predictability of wind power generation





RESILIENCE OPPORTUNITY

Improve predictability of wind power generation

SERVICE:

Wind power predictions from 1 month to 1 year

RESILIENCE
Climate Service

Wind Farm
Operator,
Owner or Investor

PRICE:

Average of €16,000/yr for a prediction report/subscription





RESILIENCE OPPORTUNITY

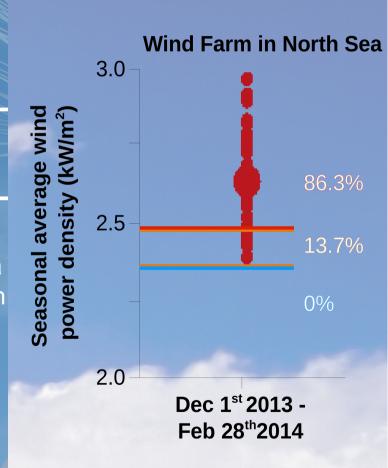
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RESILIENCE BENEFITS

Significant cost savings by anticipating market changes







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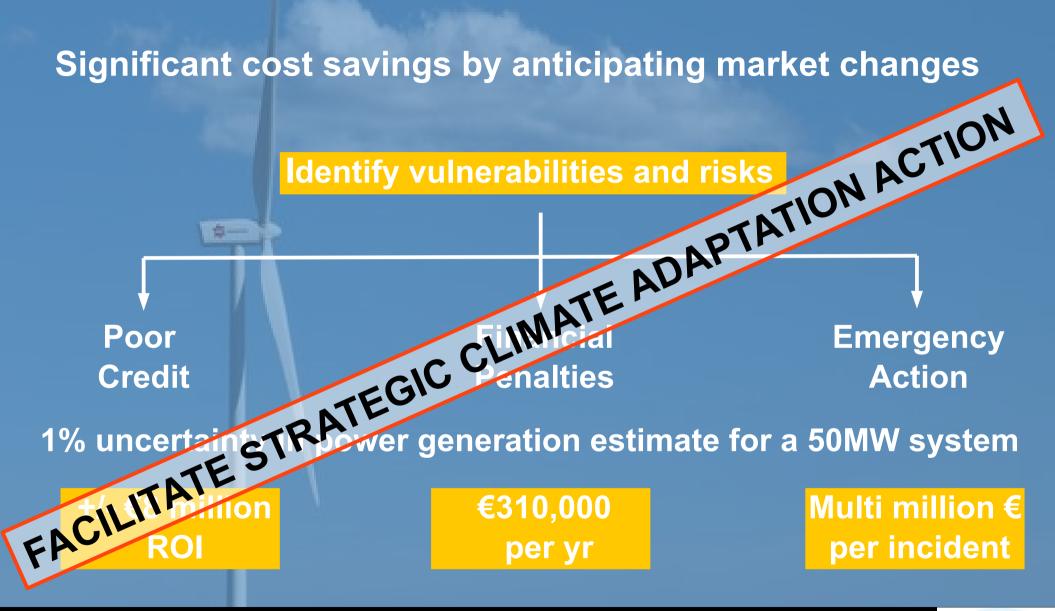
1% uncertainty in power generation estimate for a 50MW system

+/- €8 million ROI €310,000 per yr Multi million € per incident





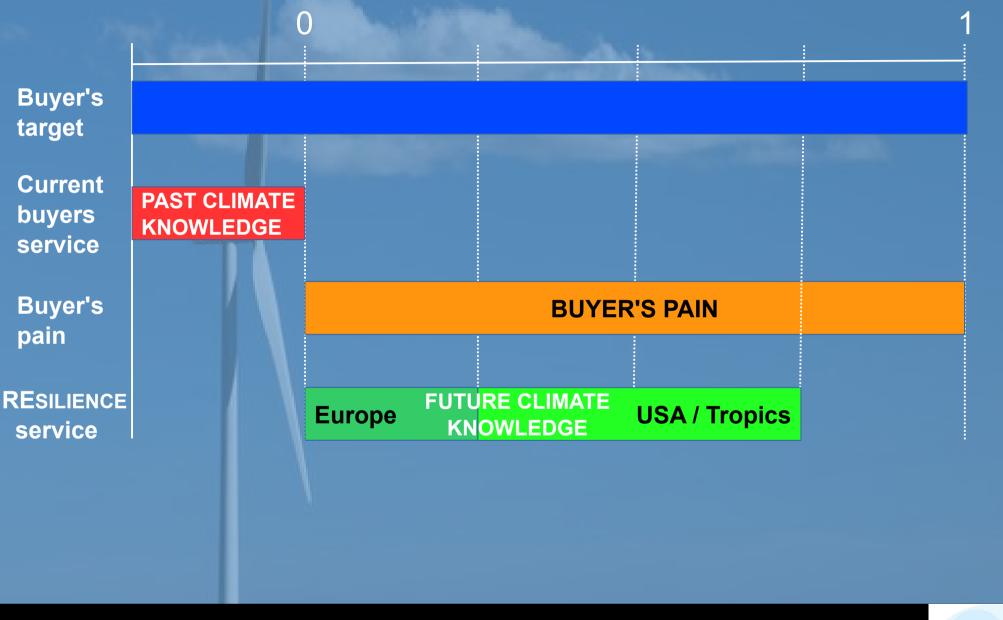
RESILIENCE BENEFITS







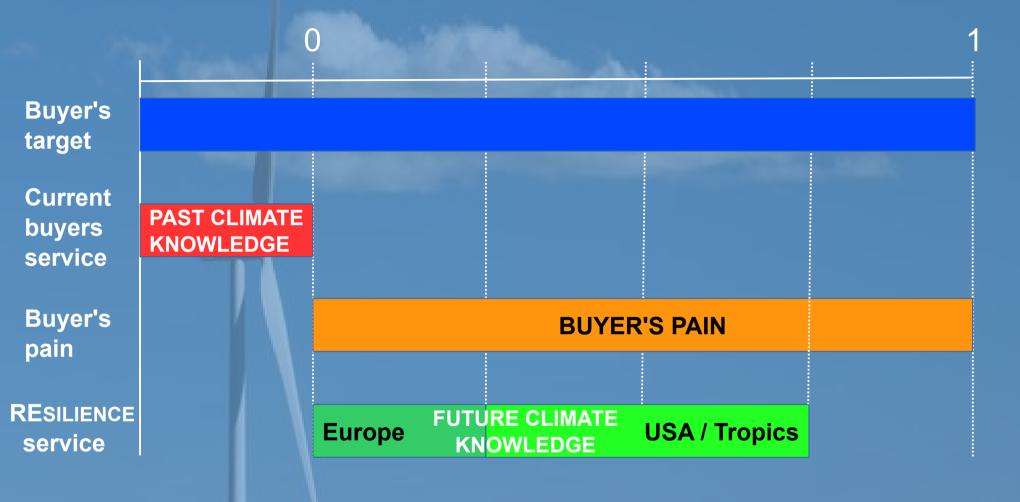
INDEX: WIND POWER ESTIMATION CAPACITY







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The First Markets: Central US, Brazil and Asia





RESILIENCE FINANCIALS: Year 1

Profit Margin

€144,000

No. Sales

10

Market Share

1%





RESILIENCE FINANCIALS: Year 1

Profit Margin

€144,000

No. Sales

10

Market Share

1%

Double targets each consecutive year...



4-



FOUNDER'S DREAM

100% global renewable energy generation.





"[Renewable] energy provision may be anticipated, not only in the short and long term as it is today, but also at intermediate horizons, where a huge market niche appears."

Ignacio Lainez Aracama, Professor of Wind Energy, EOI and Director of Energy Assessments, EDP Renewables. El País Article: 4th March 2014: Mix energético: las renovables y su predictibilidad







2013 Profits: \$3,716 mil.

Global RE power: 12,500 MW



2013 Profits: \$4,822 mil.

Global RE power: 8,900 MW



2013 Profits: \$2,852 mil.

Global RE power: 5,000 MW



2013 Profits: \$1,415 mil.

Global RE power: 535 MW



2013 Profits: \$174 mil.

Global RE power: 2,310 MW



