What is the development of WACC for wind power in the 28 EU Member States - and why?

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Introduction

Development of WACC discourse

Results from RE Frame project

Conclusion
Development of WACC discourse
WACC estimations onshore wind – approximation based on interviews

WACC across the EU-28
(Interview results for onshore wind)
Cost Reduction Facility

The basic relationships governed by the RES CRF

- EU Institution
- Bilateral agreement on recompense, tariff structure and non-tariff regulation
- Member State Government
- Guarantee of Member State tariff commitment
- Tariff payment commitment
- Project
- Investment and return
- Investor

Own illustration

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Internal arrangements between Member State and Investor under RES CRF

EU Institution

Guarantee of Member State tariff commitment

Bilateral agreement on recompense, tariff structure and non-tariff regulation

Implementer of regulation

Tariff agreement

Member State Government

Tariff regulation

Guarantee coverage of regulatory framework

Project

Investment and return

€ Investor

Own illustration
CORRECTION
Concerns only EN version.
The text shall read as follows:

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the promotion of the use of energy from renewable sources (recast)

(Text with EEA relevance)

(SWD(2016) 416 final)
(SWD(2016) 417 final)
(SWD(2016) 418 final)
(SWD(2016) 419 final)
4. The Commission shall support the high ambition of Member States through an enabling framework comprising the enhanced use of Union funds, in particular financial instruments, especially in view of reducing the cost of capital for renewable energy projects.
Methodology

**Existing data**
- Estimations of **costs of capital of wind onshore-investments** from DIA Core Project
- Comprehensive interview series with financial experts
- Evaluation of development of parameters

**Analysis**
- Comparison with **interest rates for loans from other sectors in EURO zone**
- Description of trends

**Results**
- Aggregation and visualization of meta data
- Presentation of results and **feedback from national experts**
- Preparation of deliverables: project presentation & database
Introduction

Before we start: some caveats

• There are **several methods for wind project financing**: corporate financing or project financing

• Ongoing changing interest rates

• Constant changes of RES market conditions

• **Lack of current, significant projects in some EU markets**, made sometimes model estimations necessary

• Different level of transparency of market actors
WACC Development

Decrease in most MS, but still no converging WACC

Evolution of avg. WACC value 2014 - 2016

less than 3% wind power increase 2014-2016
Plunging interest rates – but unclear consequences for market actors

Avg. Cost of Debt value 2016 (interview results)

- <3.0%
- 3.0 - <4.0%
- 4.0 - <5.0%
- 5.0 - <6.0%
- 6.0 - <7.0%
- >7.0%
- no data gathered, yet


-1.0% +2.7%

less than 3% wind power increase 2014-2016
Comparison of Cost of Debt & interest rate development

Trend indicates correlation between cost of debt & interest rates…

Evolution of Interest Rates and Cost of Debt 2014 - 2016 in EURO-16

Source: eclareon, ECB
Comparison of Cost of Debt & interest rate development

...but the development at EU Member State level is extremely diverse
Comparison of Cost of Debt & interest rate development

Differences in comparison to absolute interest rates - and their potential

Interest Rate vs. Cost of Debt 2016

Source: eclareon, ECB
Decrease in almost all Member States – change of business models?

Avg. Cost of Equity value 2016 (interview results)
- <9.0%
- 9.0 - <10.0%
- 10.0 - <11.0%
- 11.0 - <13.0%
- 13.0 - <15.0%
- >15.0%
- no data gathered, yet

-1.0% +2.7%

less than 3% wind power increase 2014-2016
Development of debt/equity ratio

Diverging ratios reflect opposing factors in MS

Avg. Debt/Equity ratio 2016
(interview results)

85/15
80/20
75/25
70/30
65/35
60/40
55/45
no data gathered, yet

Evolution of avg. Debt/Equity ratio
2014 - 2016

+5/-5
-5/+5

less than 3% wind power increase 2014-2016
Conclusions

The Good:  - Decreasing trend for WACC for wind onshore in Europe
            - Trend more positive than in other sectors

The Bad:   - Still no converging markets
            - Discrepancy in all WACC components
            - No wind-onshore deployment in some markets despite decreased WACC
            - Increasing risks for at least some market actors

The Ugly:  - Relationship between macroeconomic development, policies & WACC development still not entirely clear
            - Predictions of future developments are pretty limited

The Pretty: - Huge numbers of approaches to analyze and mitigate this challenge
             - The window of opportunity is open now.
ideas into energy.
Content

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