
Financing Renewables: The impact of changed support schemes on the cost of capital

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DIACORE-CEPS Policy Workshop
Brussels 21.5.2015



Policy Impact Analysis

Policy Impact Analysis: Objective

Objective:

- show what the **impact of policy design** elements is on cost of capital
- cost of capital comprises cost of equity and cost of debt:
- its calculation is based on
 - **interest rate**
 - **return on equity**
 - **equity share**

Policy Impact Analysis: Our Approach

Investment Case: Wind onshore

technical & financial parameters

20 MW wind onshore plant

1.5 Mio € / MW investment

average full load hours: 1900 p.a.

life time of plant: 20 years

policy design elements → changes

sliding FIP over 20 years 8 cent/kWh

reliable, predictable policies and politics

financing parameters → changes?

equity share : 20%

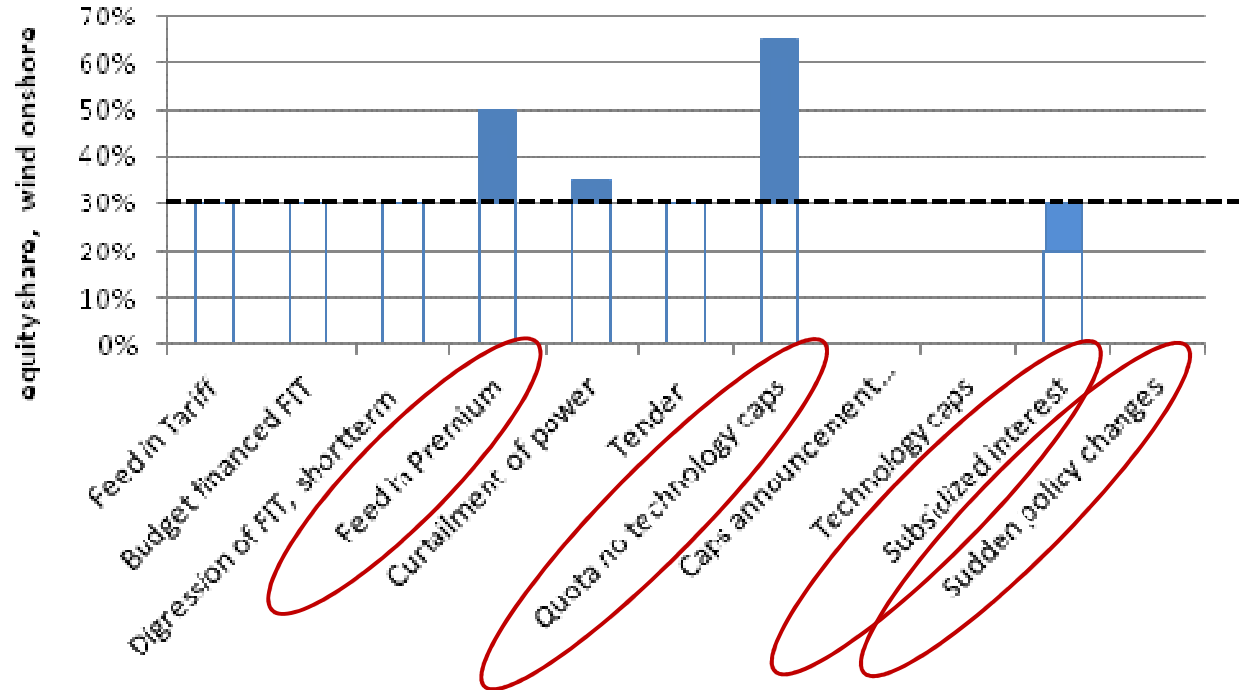
min ROE: 10 % p.a.

fixed interest rate: 5 % p.a.

→ we looked at 10 policy changes

Policy Impact Analysis: Pre-test Results

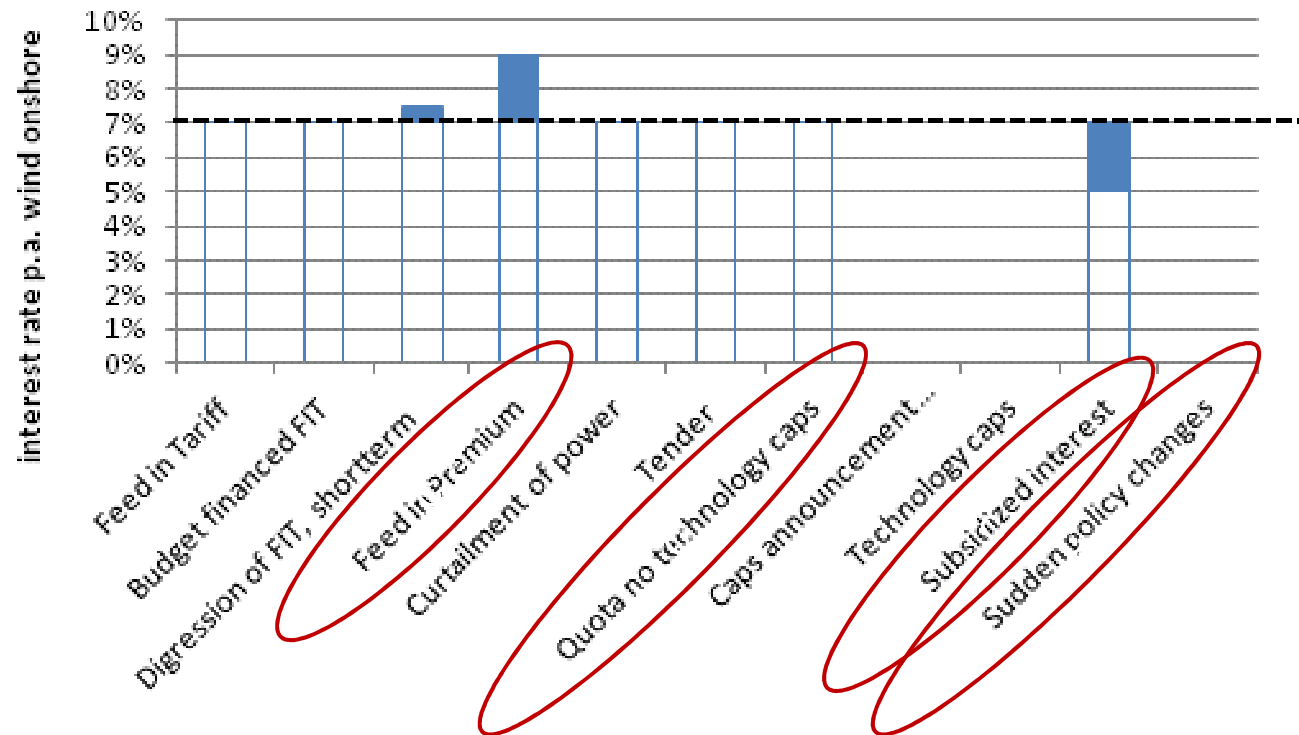
- The **share of equity** will change if a country moves from a consumer financed Feed-in Tariff (FIT) to
- Example:



Policy Impact Analysis: Pre-test Results

- The **interest rate** will change if a country moves from a consumer financed Feed-in Tariff (FIT) to

- Example:

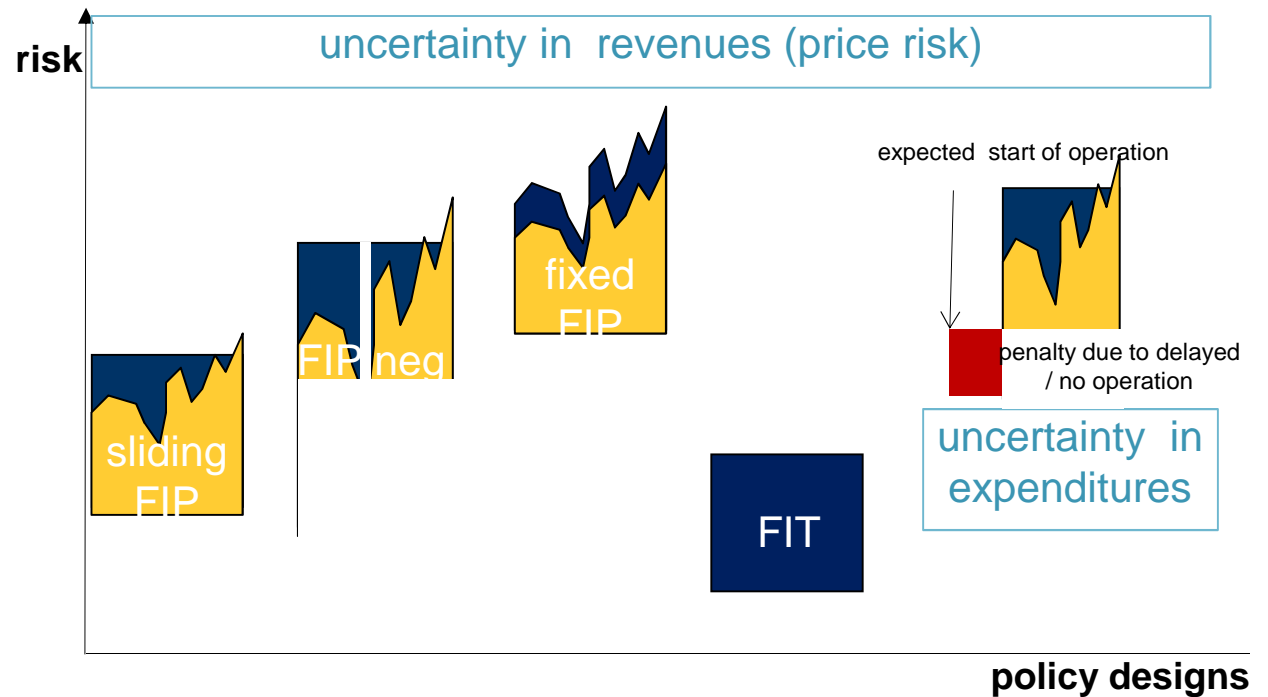


Policy Impact Analysis: Refined Approach

Changes in policy design – five „policy cases“:

changes of design features lead to uncertainties in

- revenues
- expenditures



→ risks

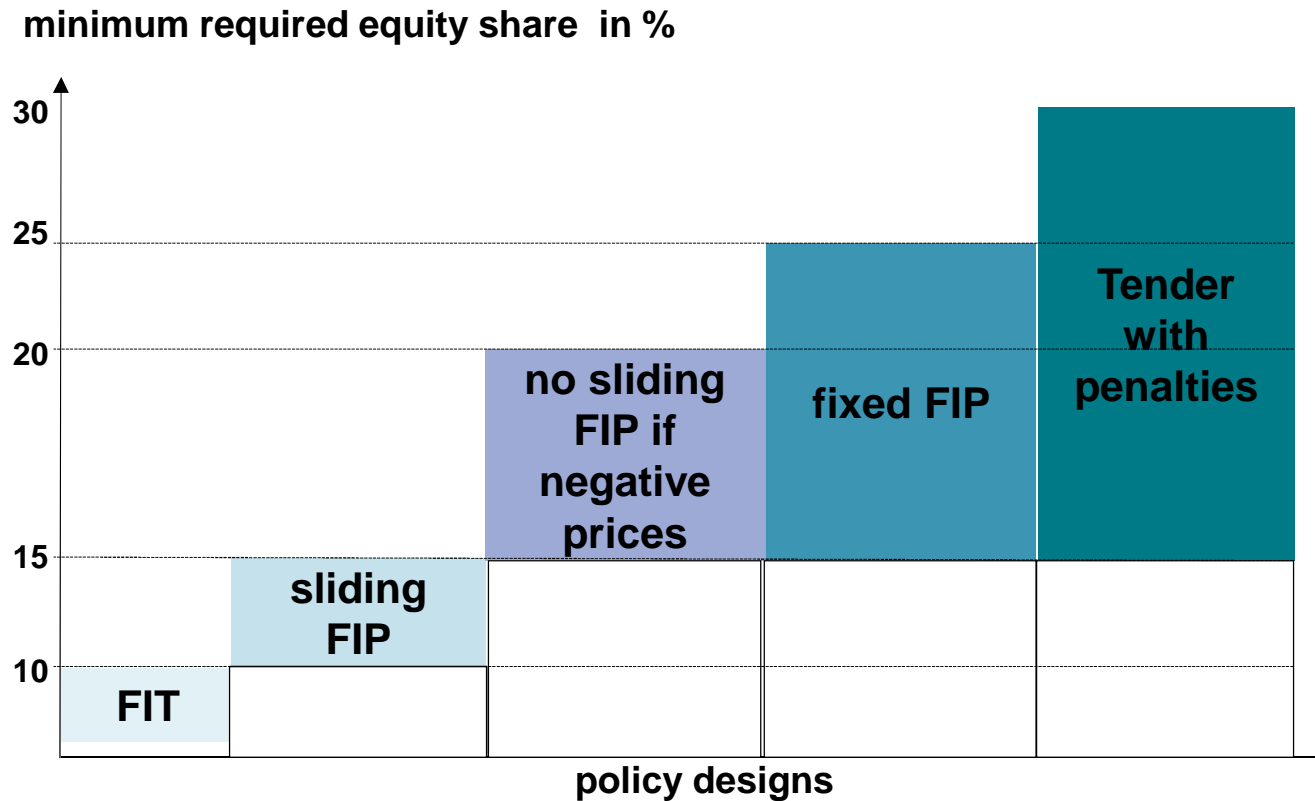
Policy Impact Analysis: Expected Outcome

policy changes
will be translated
into risks →
risks will be
translated into :

- interest rate,
return on equity,
equity share

or

- no financing



Policy Impact Analysis: Next Step

- our questionnaire

... will be electronically available (DiaCore Webpage, email)

... and can be filled out by those with a background in financing and project development

The screenshot displays the DiaCore questionnaire interface, which is divided into two main sections. The left section is titled 'The Investment Case' and contains 'Technical & financial parameters' (20 MW wind offshore plant, 1.5 Mw @ 100% investment, average full load hour: 1000 p.a., life time of plant: 20 years, form structure: fixed interest over 10 years) and 'The Policy cases' section. The right section is titled 'The Policy cases' and contains 'Please indicate the financing parameters for each case'.

The Policy cases:

Please indicate the financing parameters for each case

FFT (with a small icon of a wind turbine) FFT: wind turbine fixed load over 20 years paid by final consumer. Consumer demand is independent of changes of the wind generation price, and no change in output for new installations released 12 months in advance, guaranteeing production, and the demand is equal to the installed capacity of the wind.

Interest rate p.a.	Minimum required return on equity (ROE) in %	Minimum required equity share in %

Sliding FFP (with a small icon of a wind turbine) all other design elements remain unchanged

Interest rate p.a.	Minimum required return on equity (ROE) in %	Minimum required equity share in %

no FFP (sliding) if market prices are negative (with a small icon of a wind turbine) if market prices are negative, all other design elements remain unchanged

Interest rate p.a.	Minimum required return on equity (ROE) in %	Minimum required equity share in %

Fixed FFP and no premium if market prices are negative (with a small icon of a wind turbine) if market prices are negative, all other design elements remain unchanged

Interest rate p.a.	Minimum required return on equity (ROE) in %	Minimum required equity share in %

Policy Impact Analysis: Discussion

- Any questions or comments ?

if not, then:

- Is there a relevant policy design element/feature that is missing in our approach and that might have a high impact on the (un)certainty of revenues or expenditures ?
- Do you agree that the penalty in an auction with sliding feed in premium disposes the highest uncertainty/risk to investors ?
- Which other risks do you consider as relevant and are not addressed by our approach ?

More information:

<http://www.diacore.eu/>

WELCOME TO OUR WEBSITE

We welcome you to the Project "Policy Dialogue on the assessment and convergence of RES policy in EU Member States", started in April 2013 and carried out under the Intelligent Energy – Europe programme.



DIA-CORE intends to ensure a continuous assessment of the existing policy mechanisms and to establish a fruitful stakeholder dialogue on future policy needs for renewable electricity (RES-E), heating & cooling (RES-H), and transport (RES-T). Thus, **DIA-CORE** shall facilitate convergence in RES support across the EU and enhance investments, cooperation and coordination.

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