

Cross-border interconnector capacity: investment hurdles and incentives – Risk

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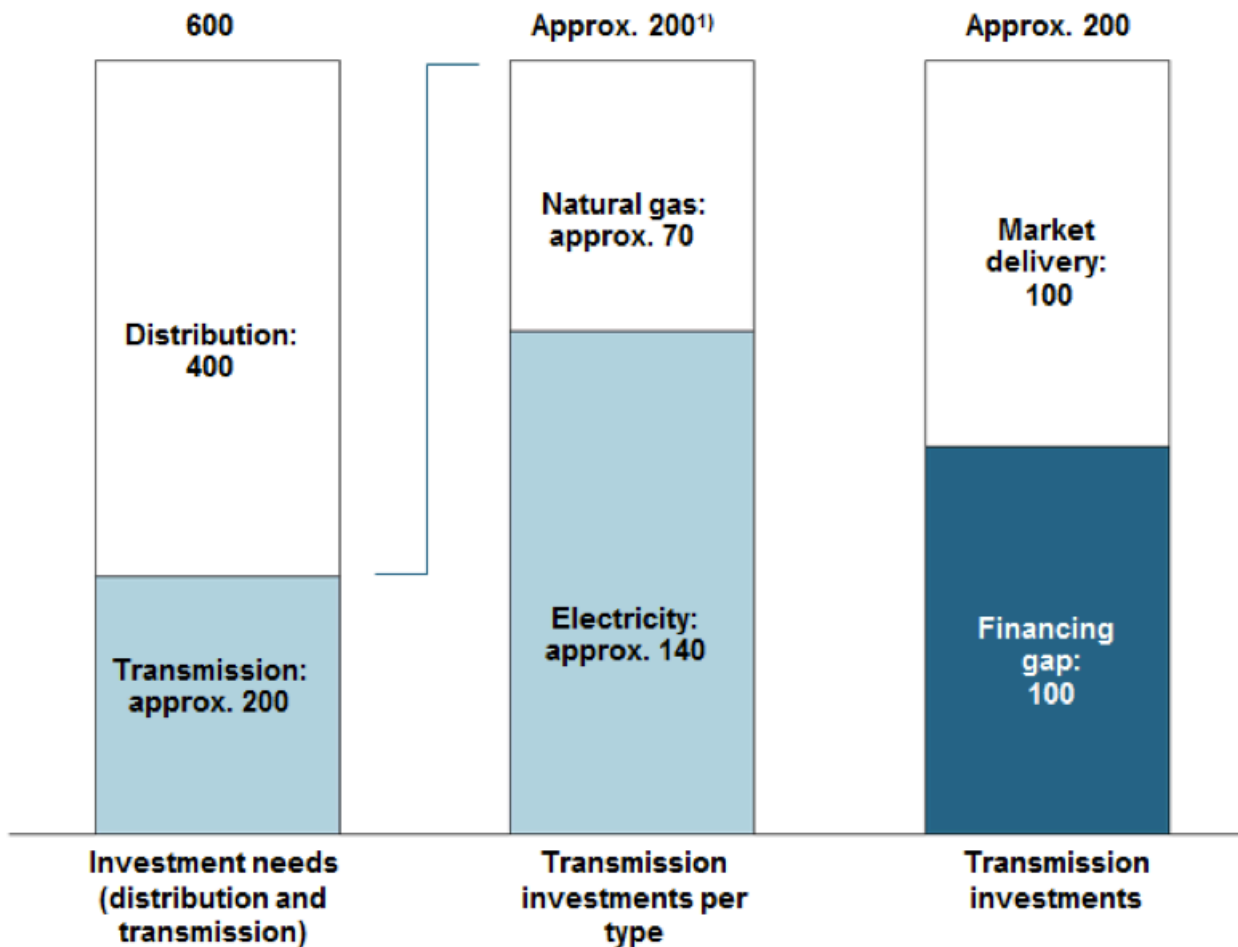
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BACKGROUND

Europe's energy infrastructure investment need



1) Actual total figure: 210; rounded to approx. 200 by the EC

Source: Roland Berger, 2011a, figure 2, S. 18; based on numbers from the the EU-Commission

Investment need for cross-border transmission ca. €200 billion till 2020.

According to EU-Commission it is going too slowly.

Investment requirement is huge

Around one trillion euros must be invested in our energy system between today and 2020⁽¹⁶⁾ in order to meet energy

policy objectives and climate goals. About half of it will be

European Commission, 2011, “Energy Infrastructure - Priorities for 2020 and beyond – a blueprint for an integrated European energy network” (p. 11)

Out of these investments **about 200 bn € are needed for energy transmission networks alone**. However, only about 50% of the required investments for transmission networks will be taken up by the market by 2020. This leaves a gap of about 100 bn €. Part of this gap is caused by delays in obtaining the necessary environmental and construction permits, but also by difficult access to finance and lack of adequate risk mitigating instruments, especially for projects with positive externalities and wider European benefits, but no sufficient commercial justification⁽¹⁷⁾. Our efforts also need to focus on further

6 problem areas

Roland Berger (2011) identifies the following problem areas:

- Permitting issues
- Financing issues
- Financing conditions
- Operator capabilities
- Specific types of projects
- **Regulatory issues**

Roland Berger (2011), „The structuring and financing of energy infrastructure projects, financing gaps and recommendations regarding the new TEN-E financial instrument”, Report for European Commission, July 31, 2011.

Permitting issue: Role of economic instruments?

5. Improve Communication and Mitigate Public Opposition					
Measure 18: Communication strategy	+++	+	0	--	✓
Measure 19: Environmental Advocate	+	0	--	--	✗
Measure 20: Extending of eligibility for compensation or mitigation	+	-	-	--	✗

Legend: +++ = very positive impact --- = very negative impact
 ✓ = measure recommended ✗ = measure not recommended

Source: Roland Berger, 2011b, p. 204.

- ▶ Roland Berger recommends not to use economic instruments.
 But perhaps there would be quite a bit of scope for economic instruments (i.e. financial compensation) to improve acceptability

Regulatory issues

Roland Berger (2011, pp. 50 ff.) identifies the following regulatory issues:

- Stability: Changing regulatory approaches create uncertainty
- Regulatory returns are too low to provide investment incentives
 - Delays
- Permitted regulatory returns are too low to attract the required equity funding from external investors
- Late recognition of pre-operational costs
- Projects with higher risk receive same rate-of-return as other projects
- Advance capacity challenge

Policy recommendations

Policy recommendations following Roland Berger (2011, pp. 70 ff.):

- Harmonize regulatory regimes
 - Create longer-term stability for investment cases
 - Provide regulatory remuneration during construction phase
 - Make investment more attractive by introducing „priority premiums“
 - „to speed up investments“
- ▶ **„priority premiums“ aka „rate of return adder“ aka „top up“**

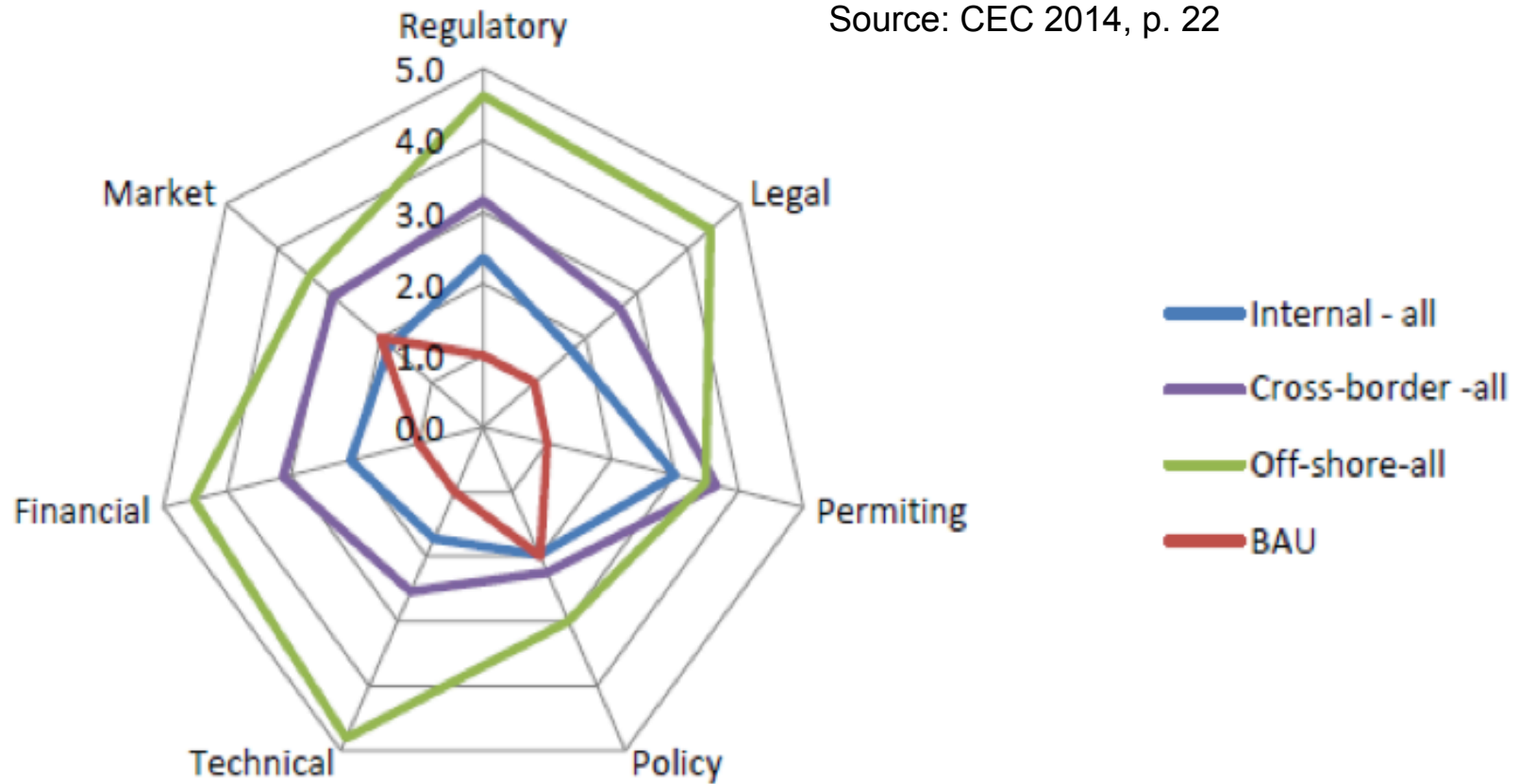
RISK

ACER, 2014, “Recommendation of ACER No. 03/2014 of 27 June 2014 on incentives for projects common interest and on a common methodology for risk evaluation”.

CEC (AF-Mercados EMI and REF-E), 2014, “Study on regulatory incentives for investments in electricity and gas infrastructure projects”, Report for the European Commission (published July 2015).

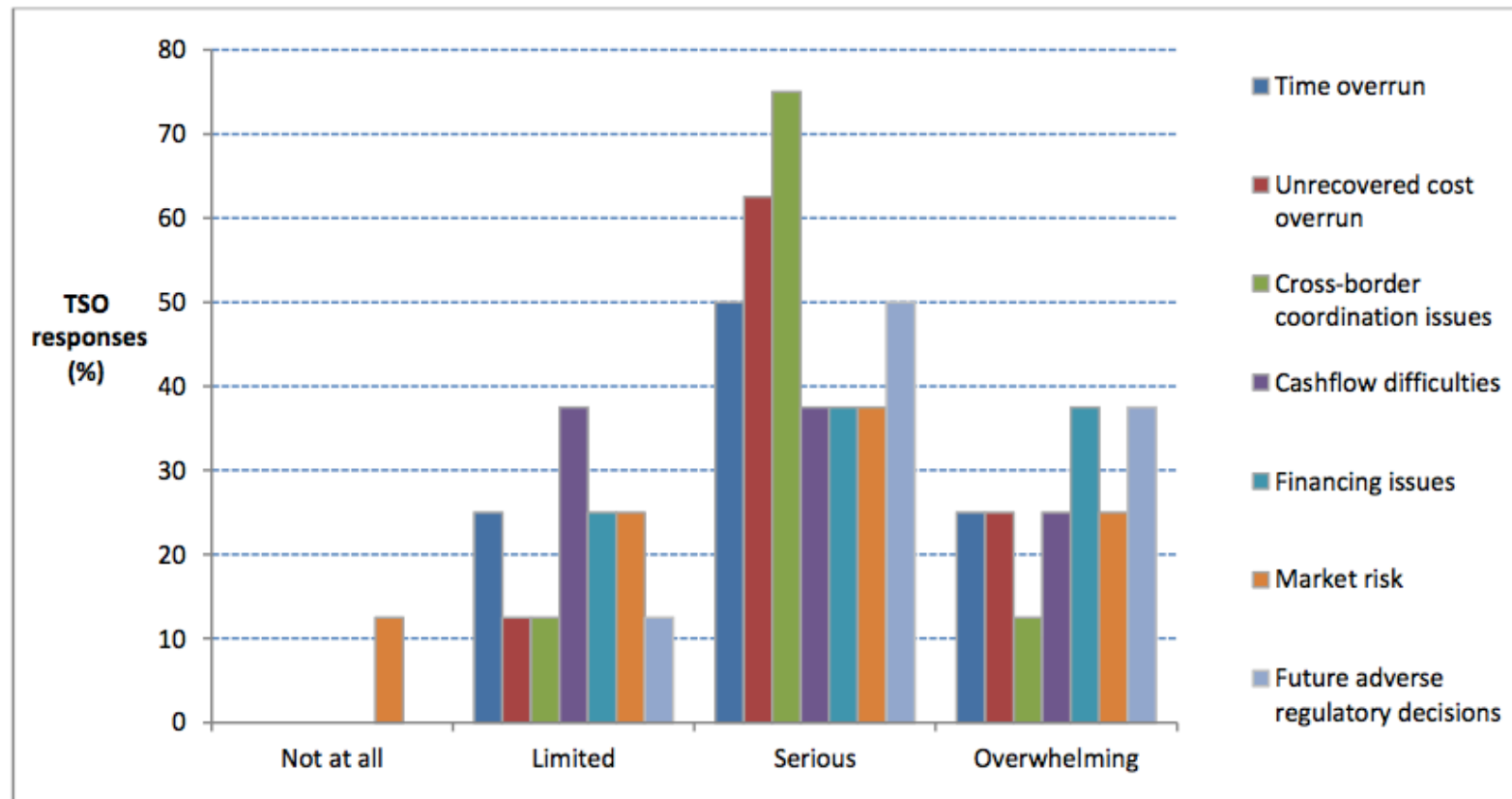
Which risks matter?

Source: CEC 2014, p. 22



The TSOs' view on risk

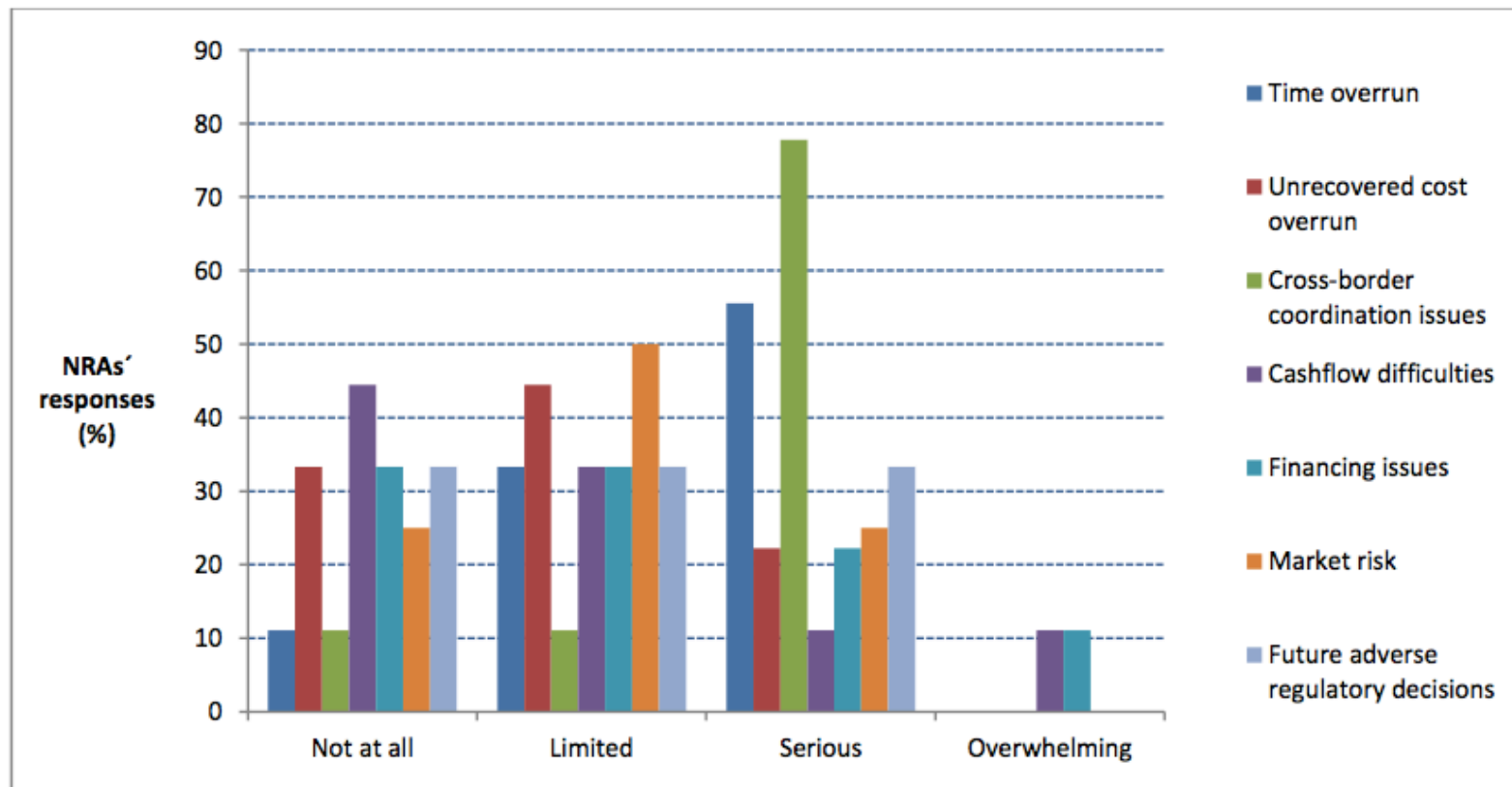
Figure 3: TSOs' perceptions of the severity of regulatory risks to PCIs' timely delivery



Source: CEC 2014, p. 34

The regulators' view on risk

Figure 4: NRAs' perceptions of the severity of regulatory risks to PCI's timely delivery



Source: CEC 2014, p. 34

Risk: Checklist according to ACER (2014)



Step 1: Availability of information on project risks

Step 2: Identification of the nature of the risk from a regulatory point of view

- a) The risk of cost overruns
- b) The risk of time overruns
- c) The risk of stranded assets
- d) Risks related to the identification of efficiently incurred costs
- e) Liquidity risk

Step 3: Risk-mitigation measures by the project promoters

Step 4: Assessment of systematic risk and definition of cost of capital

Step 5: Risk-mitigation measures already applied by NRAs

Step 6: Risk quantification

Step 7: Comparable project

What can be done with risky investment?

- **Risk-mitigation measures**
 - Diversification, insurances and hedges
- **Adjustment of regulation**
 - More typical “cost-plus” elements, away from time-lags
- **Allow higher regulated risk-adjusted rate-of-return on these projects**
 - Priority-premiums or top-ups

CEC, 2014, p. 11:

„Only if mitigating incentives (like stability provisions and measures to mitigate liquidity risk) are not regarded as sufficient should NRAs apply rewarding incentives like rate of return premiums.“

► **Is this a wise approach? Why so reluctant to increase the risk-adjusted rate-of-return?**

Priority premiums aka equity adders

Source: Roland Berger, 2011, p. 79.

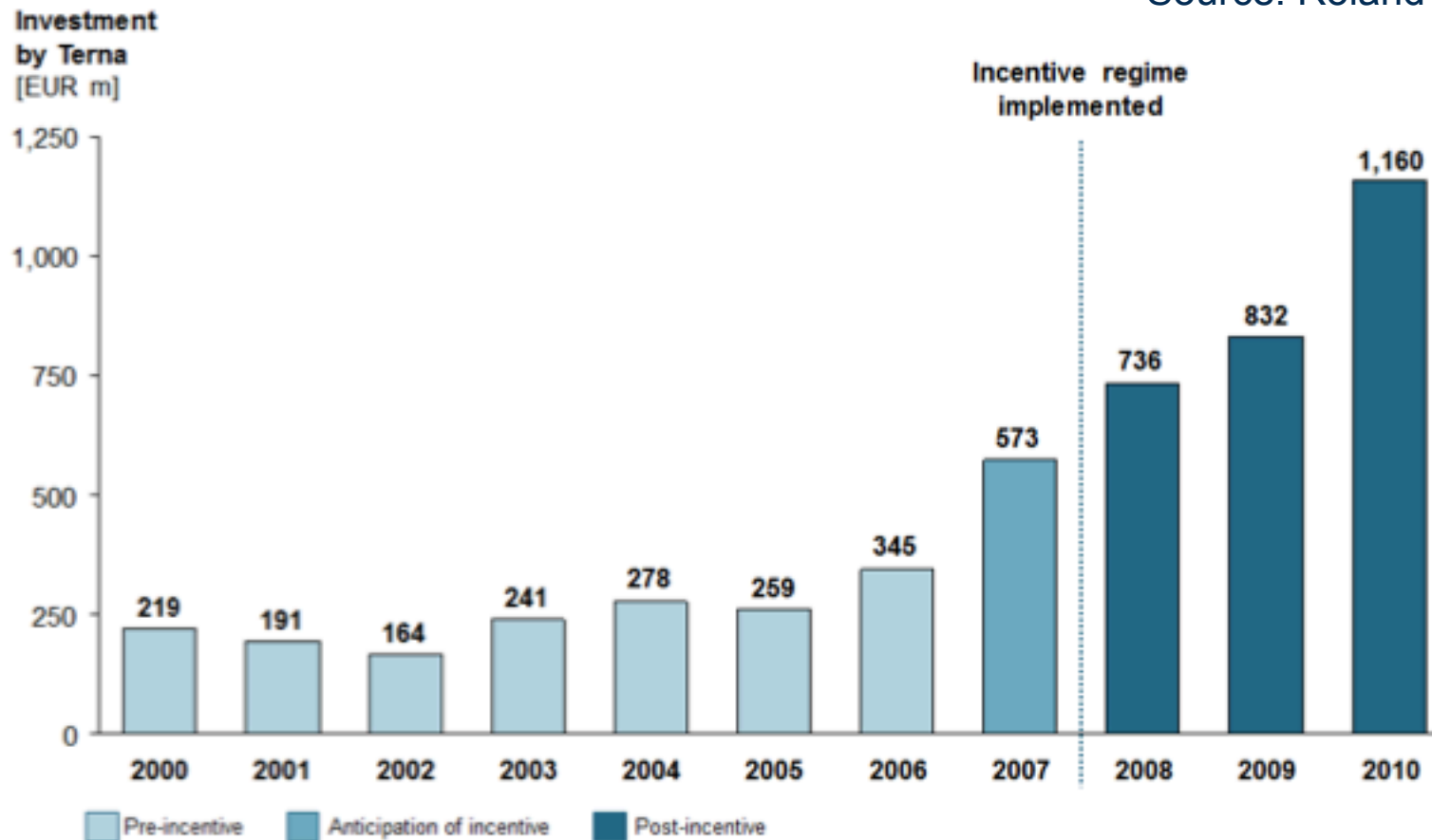


Figure 11: Effect of equity adders on investments in Italy (electricity)¹⁴

Further issues on risk (1/3)

Following convention, ACER (2014) and CEC (2014) rely on the CAPM-approach and accordingly distinguish systematic and non-systematic risk

- Following this argument: TSO can diversify non-systematic risk and should not receive additional rate-of-return for non-systematic risk.

- **But:**
 - CAPM is certainly not uncontroversial
 - Can the TSO do diversification in a cost-neutral manner or is this responsibility for the investor?
 - What about one-sided risks?
 - One-sided risk affects expected value and cannot simply be diversified away

Further issues on risk (2/3)

Is the risk already covered by CAPM via the risk-beta?

$$r_i = r_f + \beta_i \cdot (r_m - r_f)$$

- **How to determine risk-beta? (see also CEC, 2014, p. 42)**

Most problematic:

- The future may be more risky than the past
- The peers may be in a different situation
- Risks may be project-specific

Further issues on risk (3/3)

What do we do with “OPEX-risk”?

- Cf. ACER (2014, p. 9)

- **Challenges:**
 - What precisely is “OPEX-risk”?
 - How large is OPEX-risk?
 - Is it covered by risk-beta?
 - If partly, how much?
 - How to take due consideration of OPEX-risk?

Thank you very much!

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