

# The Importance of Feed In Tariffs to Attract Financial Resources

Asset & Capital Structuring  
Corporate & Investment Banking

Madrid, November 2008



Value from ideas



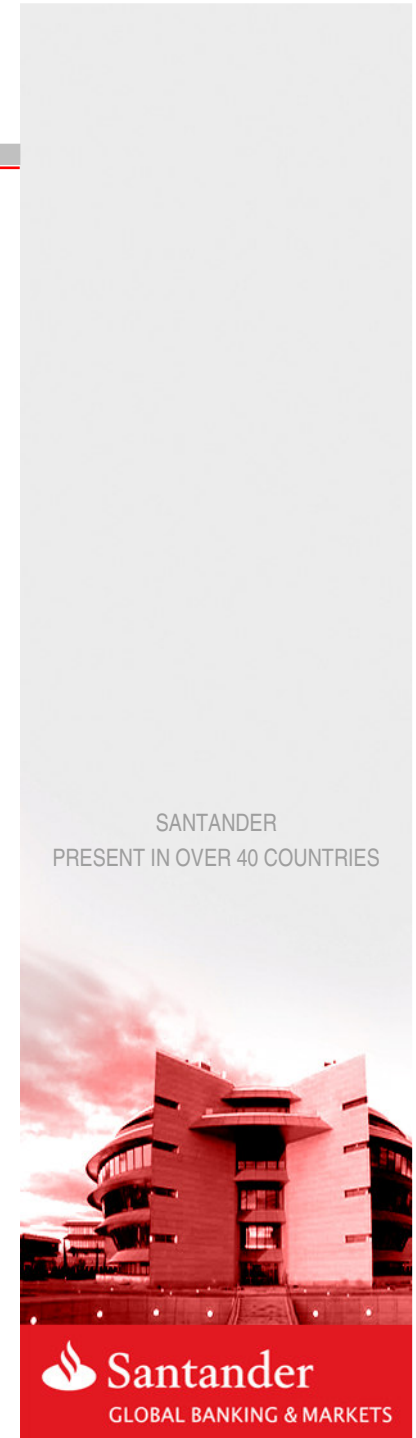
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# Index

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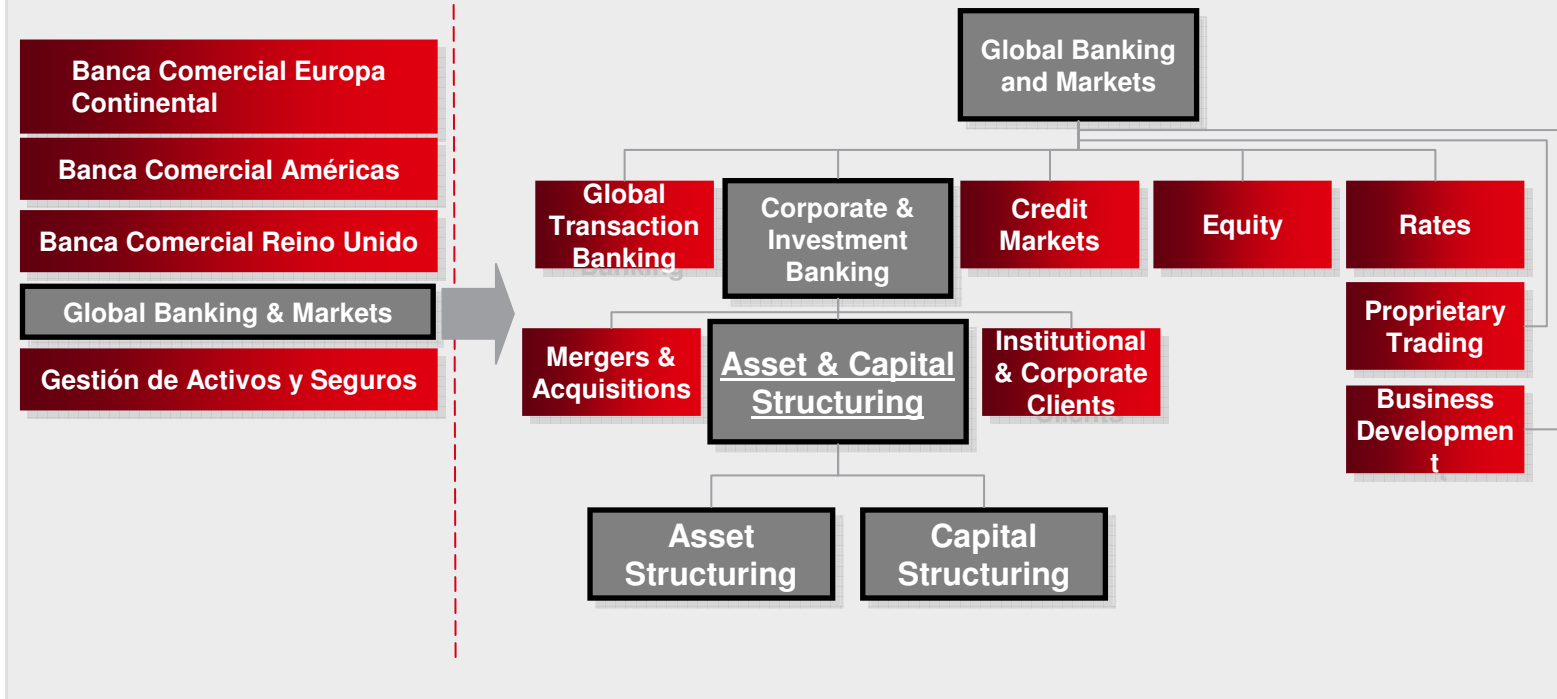
1. Asset & Capital Structuring
2. Capital Structuring
3. Feed In Tariff-Impact on installed capacity
4. Markets
5. Investment decision cycle
6. Investment chart
7. Project Financing
8. Leasing vs. Project Financing
9. Ideal Regulatory Framework
10. Current economic crisis
11. Alternative financing structures



# 1. Asset & Capital Structuring

## A&CS

Asset & Capital Structuring (A&CS) is part of the Corporate & Investment Banking Area, which in turn is a subarea of the Global Banking and Markets Division.



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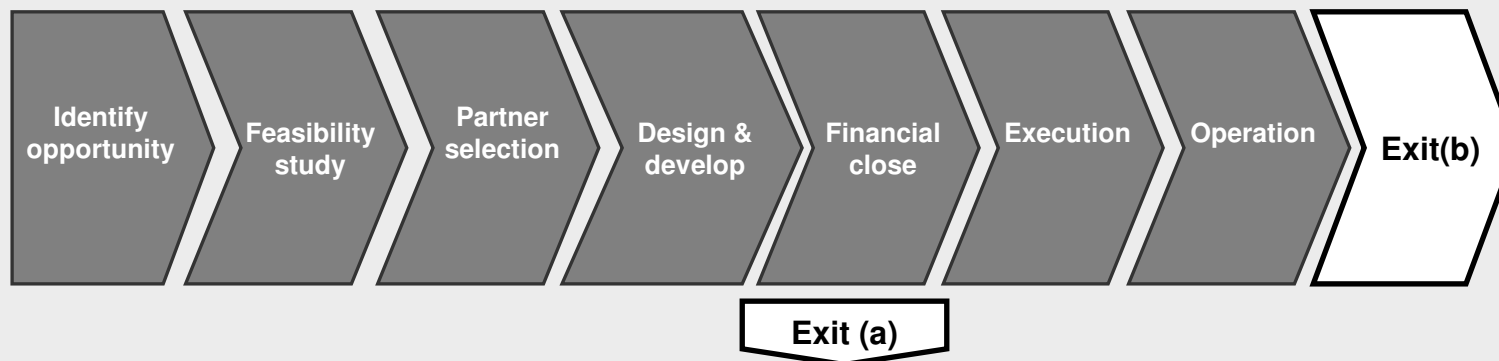


## 2. Capital Structuring

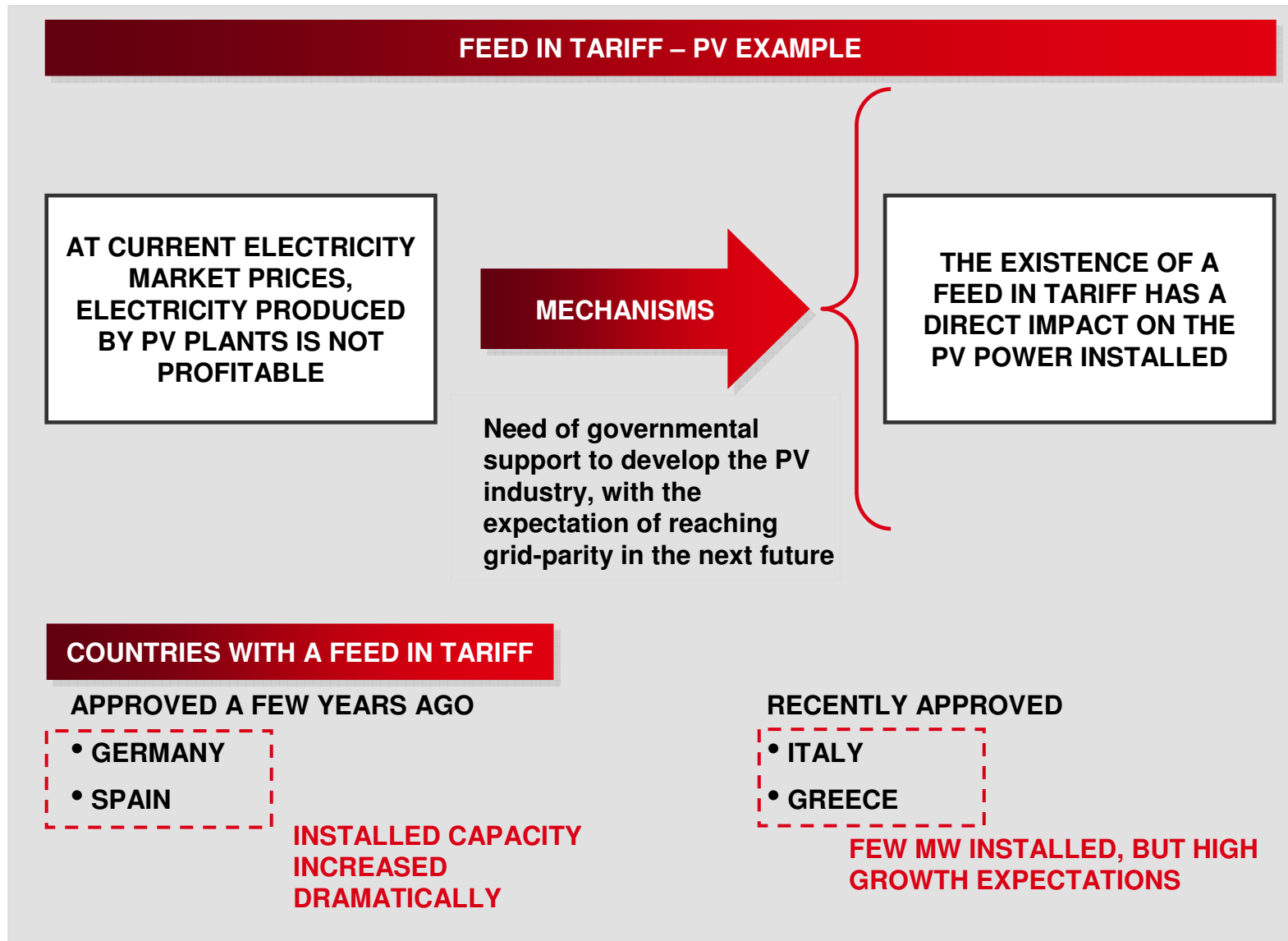
Capital Structuring activity is focused on project promotion and seed investment.

DESCRIPTION
<ul style="list-style-type: none"><li>▪ Seed capital investment</li><li>▪ Project promotion and development</li></ul>
ACTIVITIES
<ul style="list-style-type: none"><li>▪ Renewable energy – New technologies</li><li>▪ Carbon finance – climate change</li><li>▪ Energy efficiency</li></ul>

Seed investment is the **entry into a project at the concept stage** and **active participation** in its **promotion and development** until the project reaches its operational stage at which time the investor looks to exit from the project.



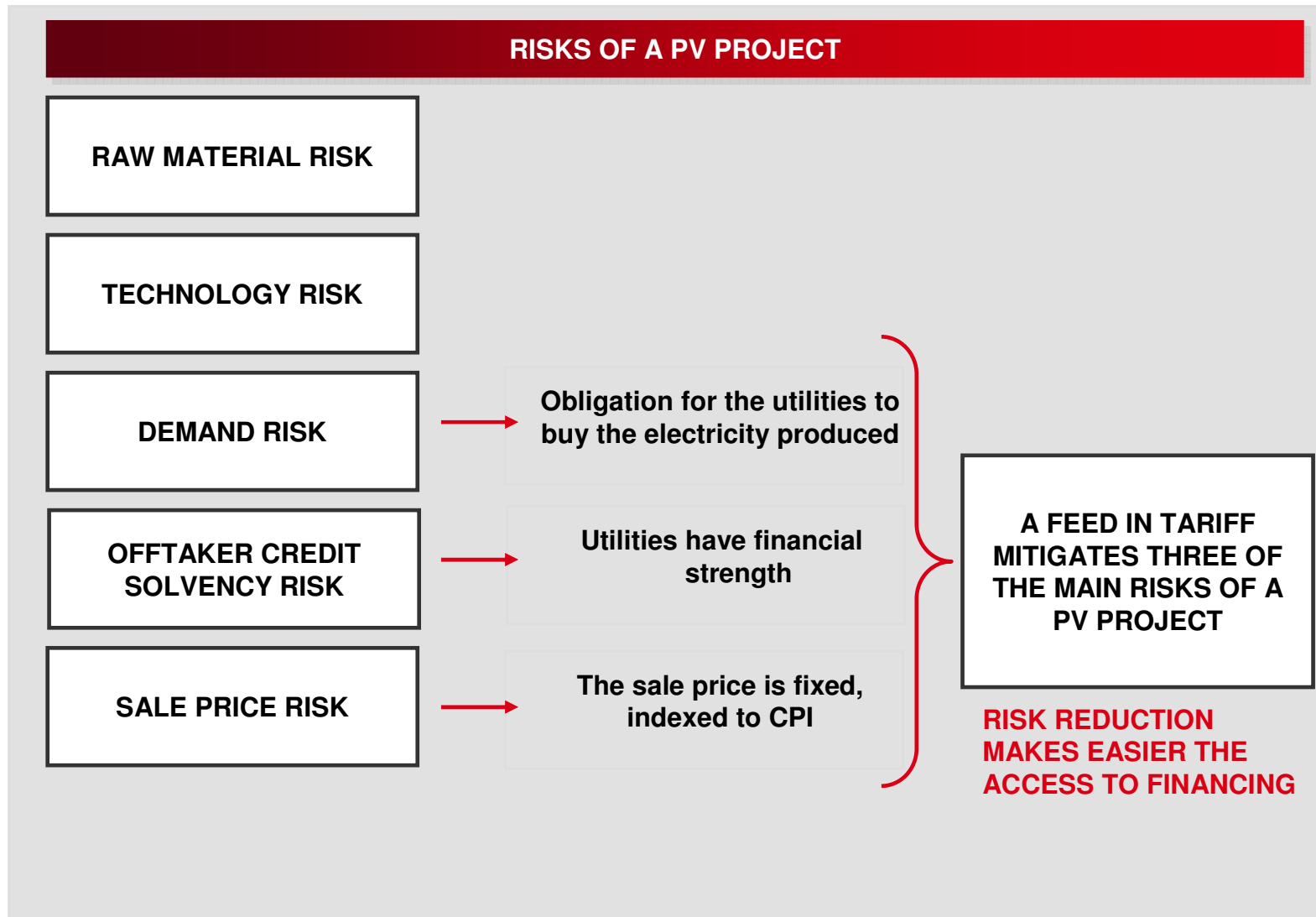
### 3. Feed In Tariff-Impact on installed capacity (I)



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### 3. Feed In Tariff -Impact on installed capacity (II)



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## 4. Markets-Germany (I)

### REGULATORY FRAMEWORK

#### GERMAN FEED IN LAW (EEG)

- Inspiration for many countries
- Achievement of environmental goals and leadership of industrial development, thanks to political commitment

#### NEW LEGISLATION JUNE 2007

- Decision of the German Parliament of amending the EEG
- Annual digression rates will increase as from 2009
- There will no longer be a bonus for façade integrated systems
- If the growth of the PV market (new installations) in a year is stronger or weaker than the defined growth corridor, the digression in the following year will increase or decrease by one percentage point respectively

#### ADJUSTMENT IN FEED IN TARIFF DIGRESSION RATE IN GERMANY

	2008	2009	2010	2011
Roof top < 100 kWp	5%	8%	8%	9%
Roof top > 100 kWp	5%	10%	10%	9%
Ground mounted	6.50%	10%	10%	9%
	<b>Degression</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Upper limit in MWp	above: +1%	1,500	1,700	1,900
Lower limit in MWp	below: 1%	1,000	1,100	1,200

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## 4. Markets-Germany (II)

### MARKET SITUATION IN 2007

Germany remain the most important global PV market. Although the absolute market figures keep growing in Germany, the market share of Germany in Europe has shrunk last years as markets as Spain and Italy finally followed the successful German path

**CUMULATIVE  
INSTALLED POWER OF  
PV SYSTEMS IN 2007**



**3,800 MW**

**ANNUALL INSTALLED  
POWER IN 2007**



**1,100 MW APROX**

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## 4. Markets-Spain (I)

### RD 661/2007

#### TARIFF:

#### Power (P) ≤100 kW:

- 45.513 c€/kWh during the first 25 years
- 36.411 c€/kWh afterwards

#### 100 Kw < P ≤ 10 MW

- 43.149 c€/kWh during the first 25 years
- 34.519 c€/kWh afterwards

#### ACCESS TO FEED-IN TARIFF:

- All the facilities which obtain the Definitive Registration in the RAIPRE before the 28<sup>th</sup> of September

#### TARGET OF MW INSTALLED:

- Target of MW installed **for a certain date**. Until this date, PV plants have guaranteed access to the feed-in tariff.

### RD 1578/2008

#### TARIFF:

- **Type I:** located on roofs (including carports) or facades (in both cases urban cadastral reference) **up to 2 MW:**

- Type I.1: P ≤ 20 kW : 34.000 c€/kWh during 25 years
- Type I.2: P > 20 kW : 32.000 c€/kWh during 25 years

- **Type II:** PV plants that do not qualify as Type I up to **10 MW:** 32.000 c€/kWh during 25 years

#### ACCESS TO FEED-IN TARIFF:

- Previous registration in the Pre-assignment Registry and obtaining of the Definitive Registration in the RAIPRE<sup>(\*)</sup> in the following 12 months

#### QUOTA SYSTEM:

Periodic limits established to scheme applicability

- Type I: 267 MW
  - Type I.1: 10%
  - Type I.2: 90%
- Type II: 133 MW + 100MW additional quota (in 2010 60 MW additional quota)

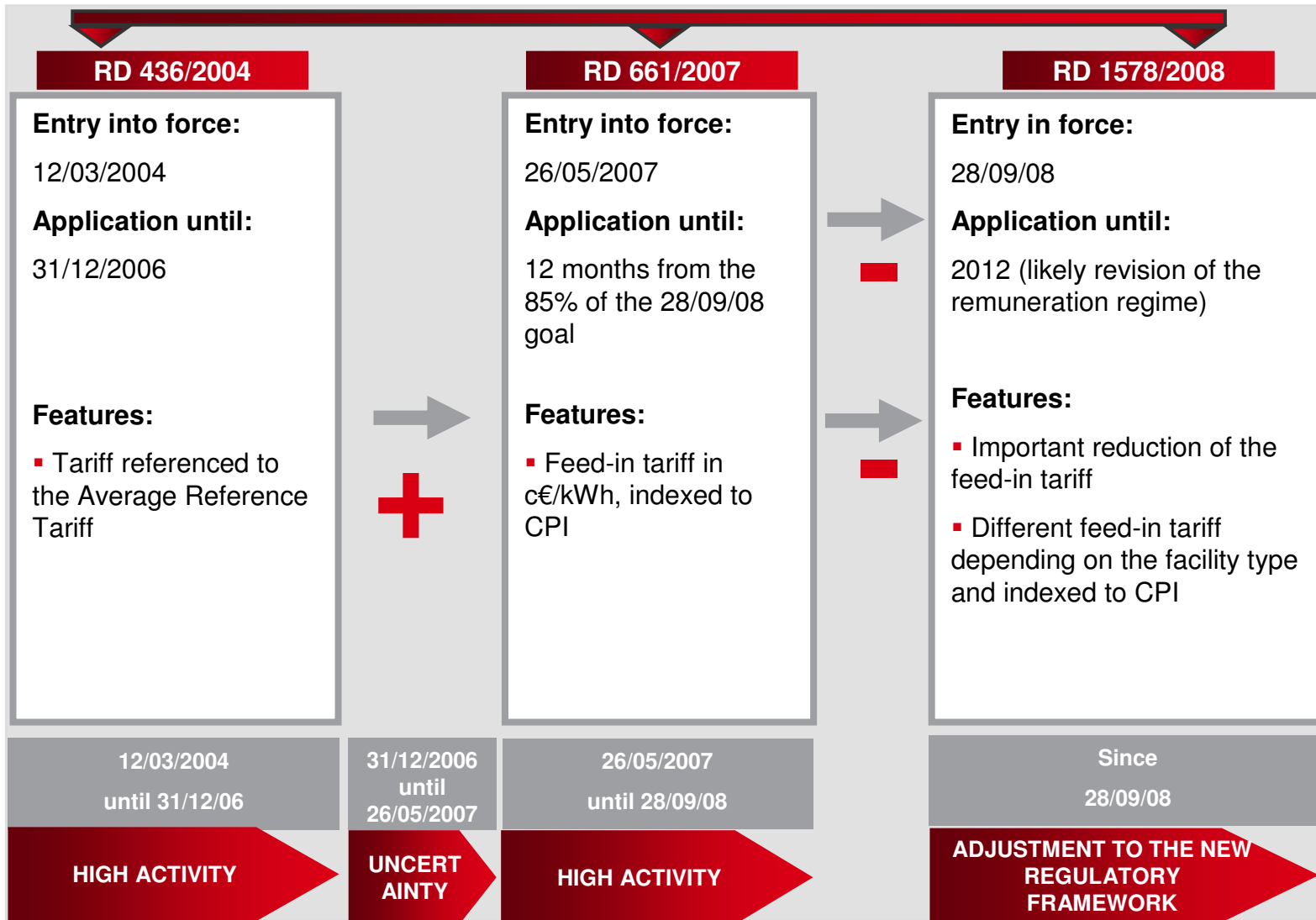
30%

26%

Changing environment



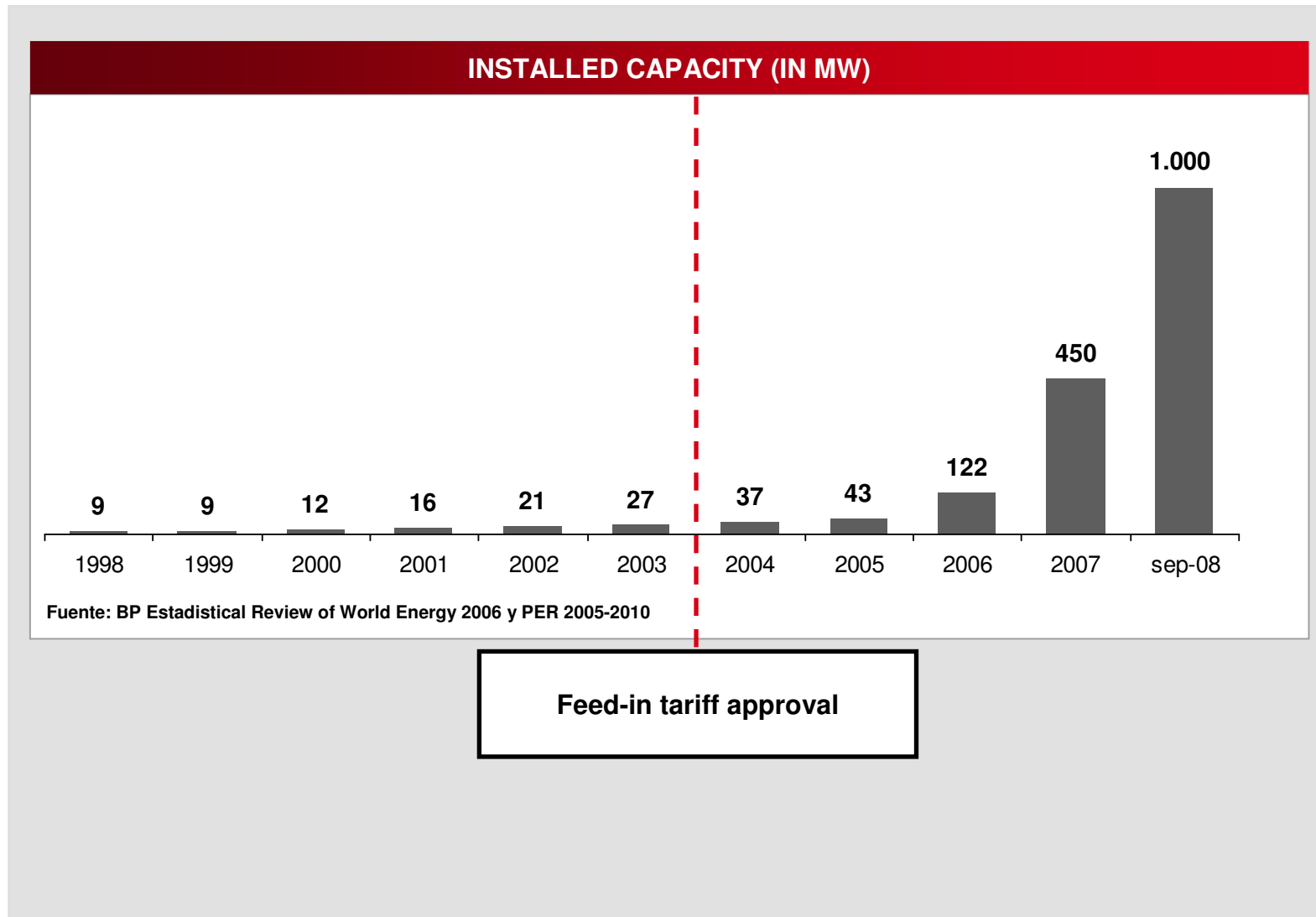
## 4. Markets-Spain (II): Regulatory framework development



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## 4. Markets-Spain (III)



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## 4. Markets-Italy (I)

### REGULATORY FRAMEWORK

#### FEED IN TARIFF

- Paid by GSE (Gestore dei Servizi Elettrici)
- The tariffs change according to the **plant size and level of building integration**
- The **lowest tariff** of 0.36 €cent/kWh is awarded to non integrated systems bigger than 20 kW
- Unlike the previous version of the Conto Energia, there is no restriction of the maximum size of this category
- The **highest tariff** goes to systems between 1-3 kW which are integrated
- The incentives remain the same until the end of 2008 and are granted for 20 years

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## 4. Markets-Italy (II)

### MARKET SITUATION IN 2007

**CUMULATIVE  
INSTALLED POWER OF  
PV SYSTEMS IN 2007**



**100 MW**

**ANNUALL INSTALLED  
POWER IN 2007**



**50 MW**

**CUMULATIVE  
INSTALLED POWER OF  
PV SYSTEMS EXPECTED  
IN 2008**



**200 MW**



# 4. Markets-Greece (I)

## REGULATORY FRAMEWORK

### ORIGINAL FEED IN TARIFFS 2006

PV system size	Mainland Grid	Autonomous Island Grids
≤ 100 kWp	0,45 €/kWh	0,50 €/kWh
> 100 kWp	0,40 €/kWh	0,45 €/kWh

### GRANTS

	ZONE A	ZONE B	ZONE C
<b>DIRECT LEASING FOR EMPLOYMENT CREATED</b>	20%	30%	40%
<b>TAX REDUCTION</b>	60%	100%	100%

### GREECE ZONES



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## 4. Markets-Greece (II)

### MARKET SITUATION IN 2007

The new Feed In Tariff system and the Investment Incentives Law will make PV application financially attractive for investment in the Greek PV market.

**CUMULATIVE  
INSTALLED POWER OF  
PV SYSTEMS IN 2007**



**10 MW**

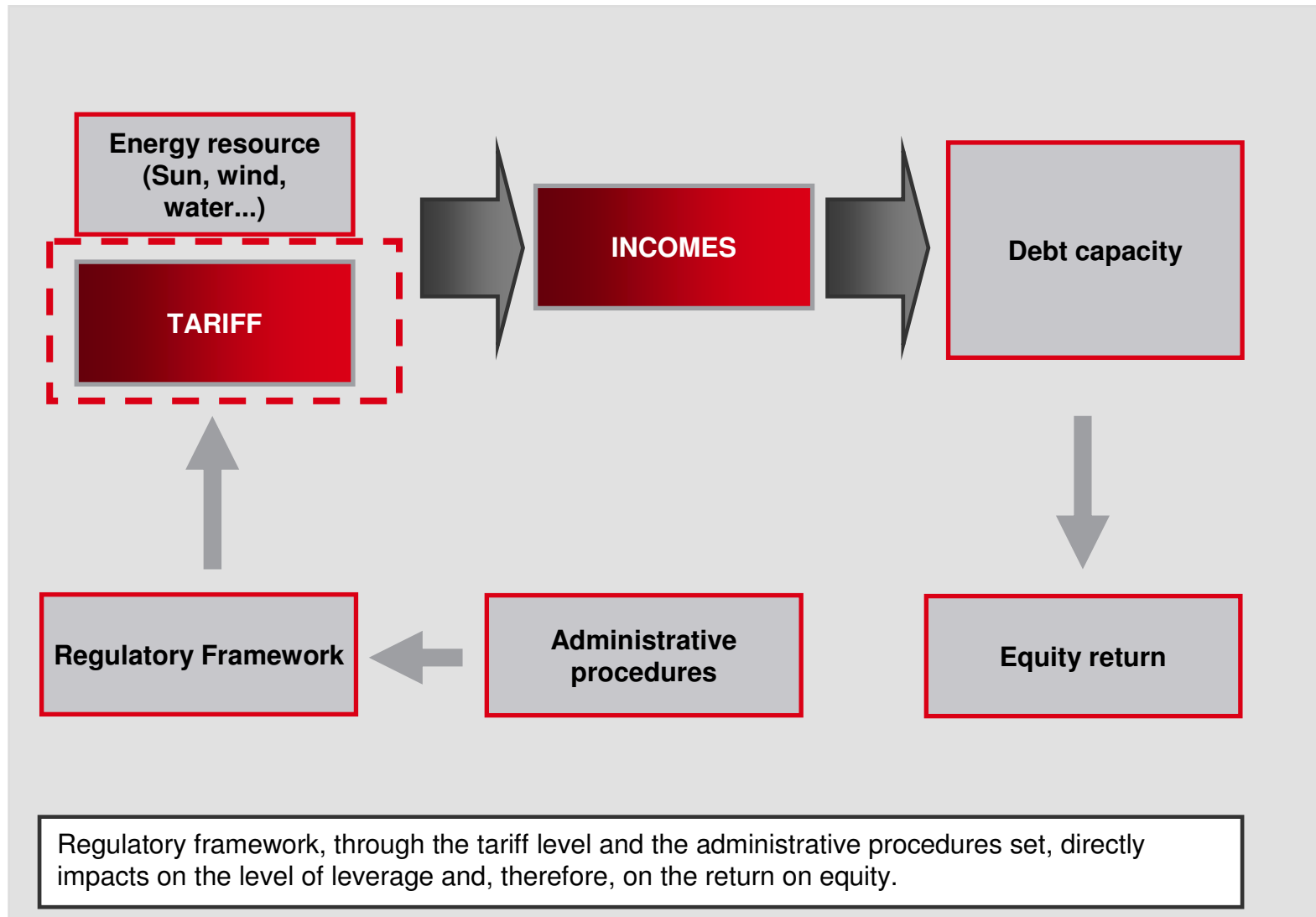
**INSTALLED PV POWER  
EXPECTED BY 2020**



**700 MW**



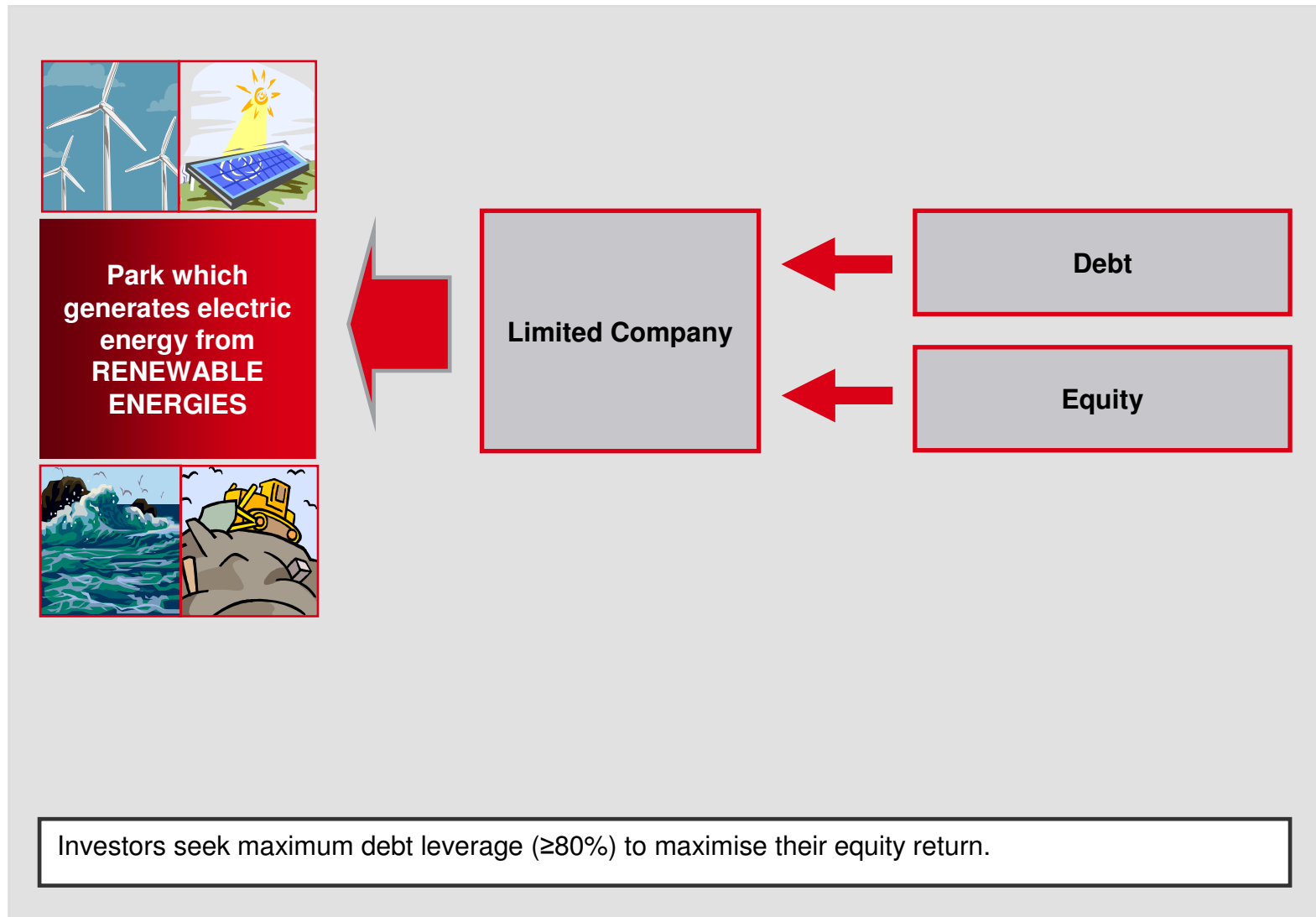
## 5. Investment decision cycle



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## 6. Investment chart



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# 7. Project Financing

With Project Financing, recourse is limited to the cash flows generated by the project. Unlike Corporate Debt, with Project Financing, in case project cash flows are insufficient for debt repayment, banks are not entitled to act against equity investors wealth.

## Corporate Finance

### 1. REPAYMENT FINANCING SOURCE

- Cash flows generated by the project and if they are not enough, equity investors wealth

### 2.-RISK

- Risk rests on the investor wealth

### 3.-GUARANTEES

- Particular of the project's investor

## Project Finance

### 1. REPAYMENT FINANCING SOURCE

- Only Cash Flow generated by the project

### 2. RISK

- Risk rests on the project

### 3. GUARANTEES

- Engineering, Procurement and Construction contract (EPC) and Operation and Maintenance contract (O&M) with closed price and terms, and an acceptable contractor
- Plant performance guarantee for several years from the receipt of the facility
- O&M for all the debt tenor
- Satisfactory reports from technical, legal and insurance advisors
- Favourable and stable regulation (country risk)

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## 8. Leasing vs. Project Financing

### LEASING

#### INVESTOR RECOURSE:

- The investor takes responsibility with his assets for the repayment of the financing in case the Project Cash Flows are not enough.

#### LEVERAGE:

- The amount of debt depends only on the financial capacity of the investor.

#### TERM:

- Between 10-15 years.

#### LINE CONSUMPTION:

- Project's debt consumes investor's risk.

#### EXCLUDING VAT:

- VAT is accrued with each leasing quotas.

### PROJECT FINANCE

#### NO INVESTOR RECOURSE:

- The financing is repaid only with the Project Cash Flows.

#### MAXIMUM LEVERAGE:

- Debt capacity is as big as possible and thus, investor's equity in risk is the smallest it could be.

#### TERM:

- Between 18-21 years. A longer term enables an earlier equity remuneration.

#### LINE CONSUMPTION:

- Project's debt does not consume investor's risk because it is a financing non recourse to the investor.

#### VAT FINANCING:

- Project's VAT is financed with a VAT loan and its repayment is backed with the rights against the Spanish Tax Authorities.

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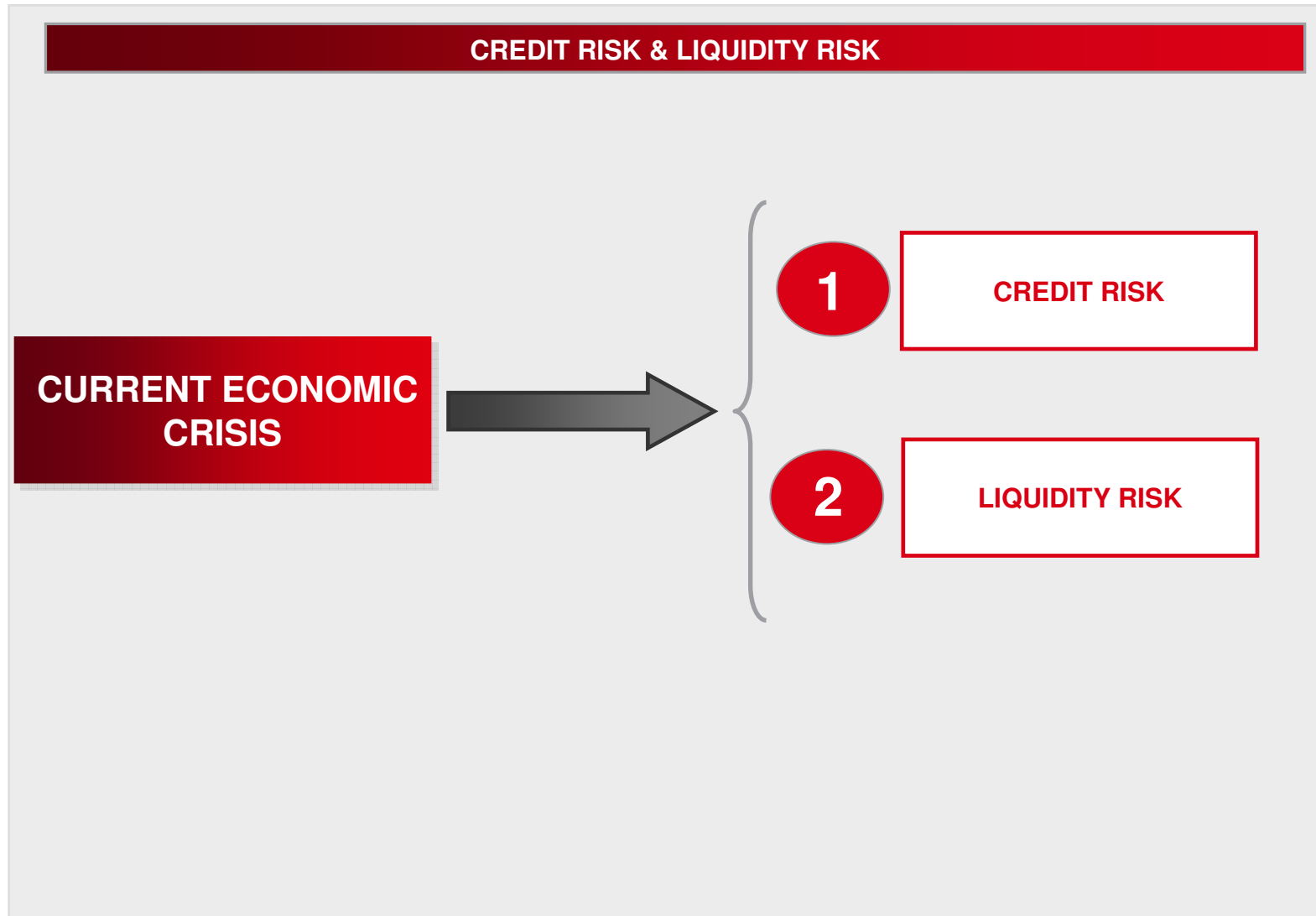
## 9. Ideal Regulatory Framework

<b>STABILITY</b>	Stable legislation with limited changes
<b>TARIFF</b>	Feed-in tariff applicable for a long period (minimum period 25 years)
<b>VALIDITY</b>	Non retroactively
<b>GROWTH RATE</b>	Constant growth rate (indexed to CPI)
<b>SIMPLICITY</b>	Understandable legislation and limited administrative process

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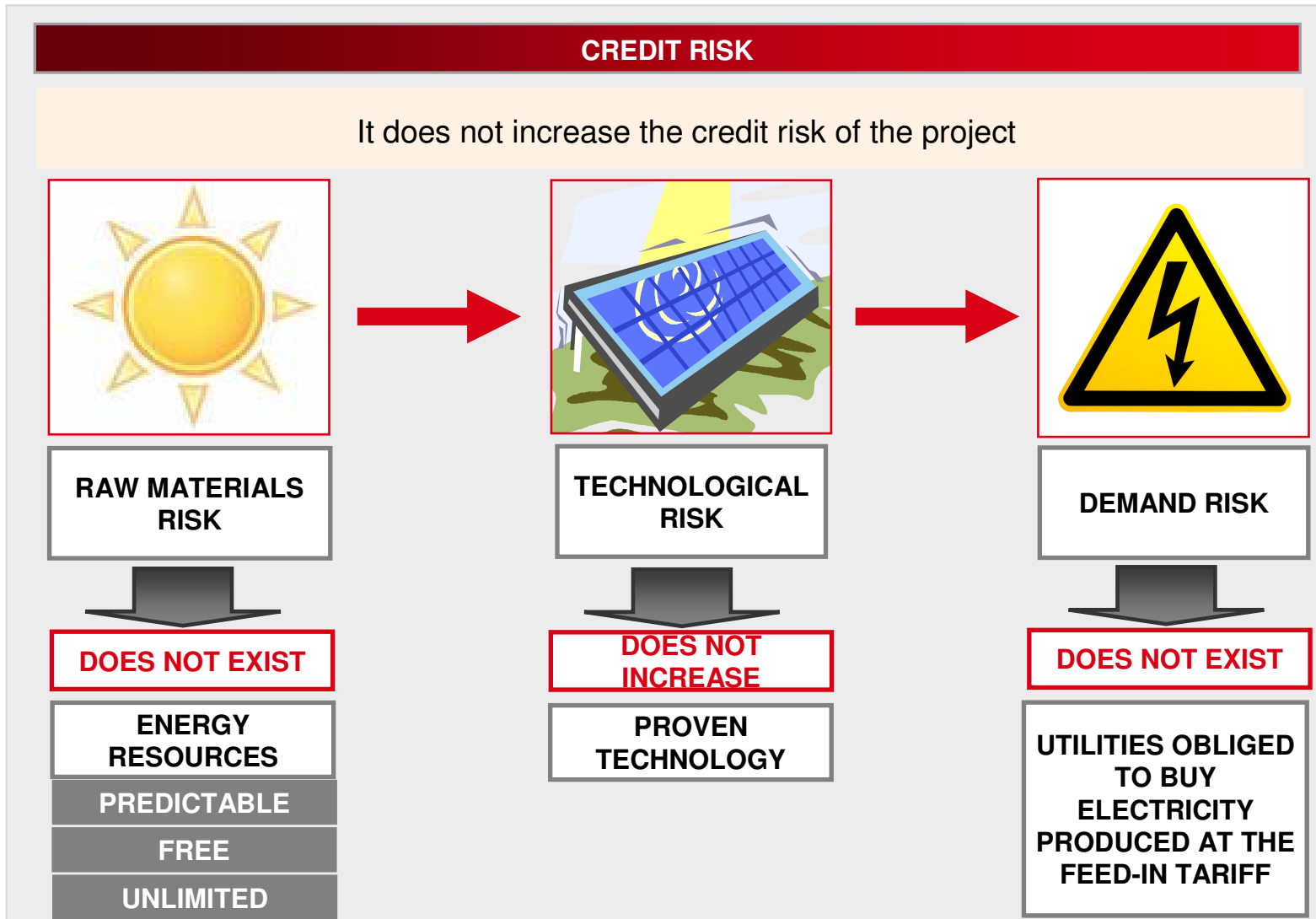


## 10. Current economic crisis (I)



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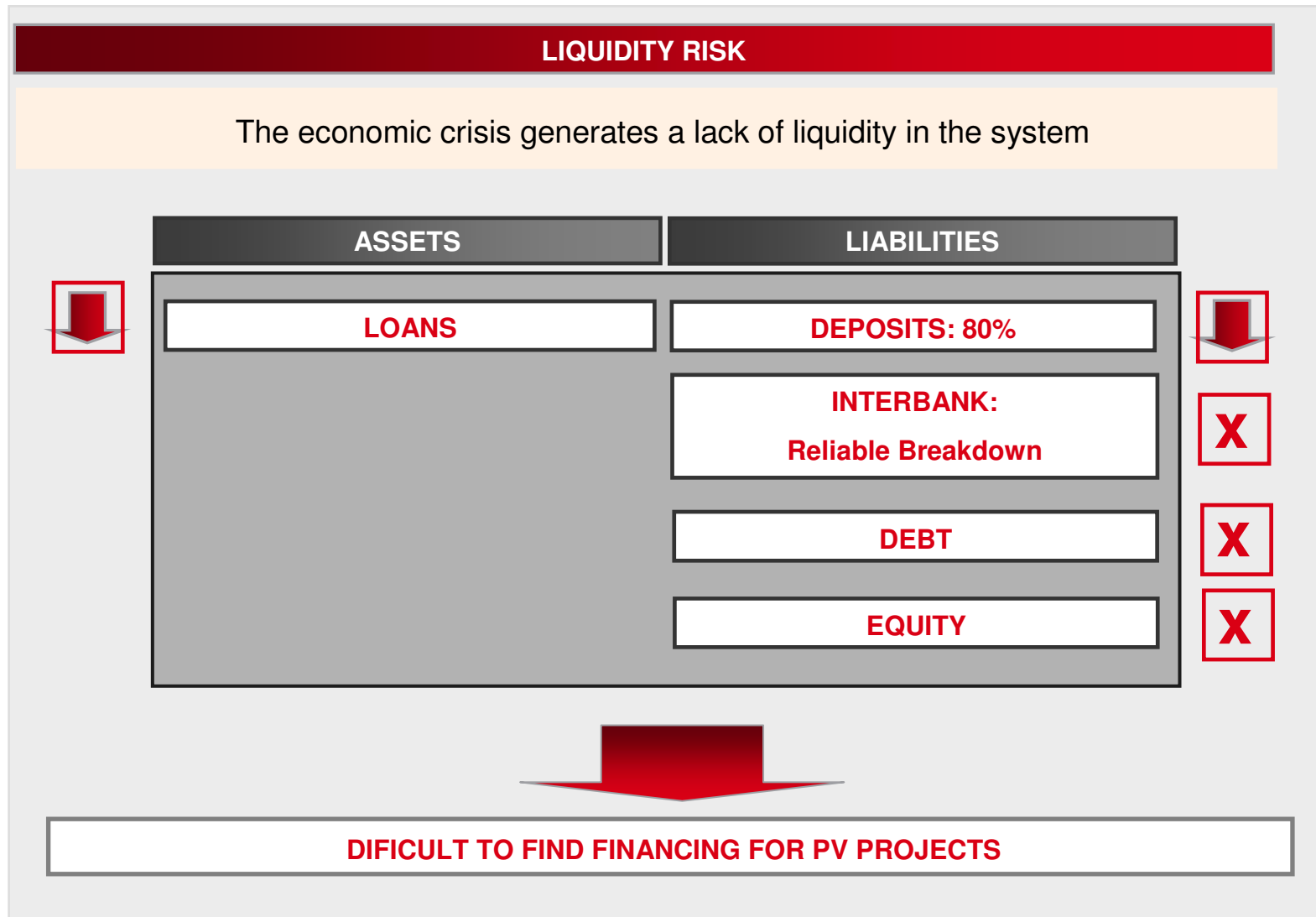
# 10. Current economic crisis (II)



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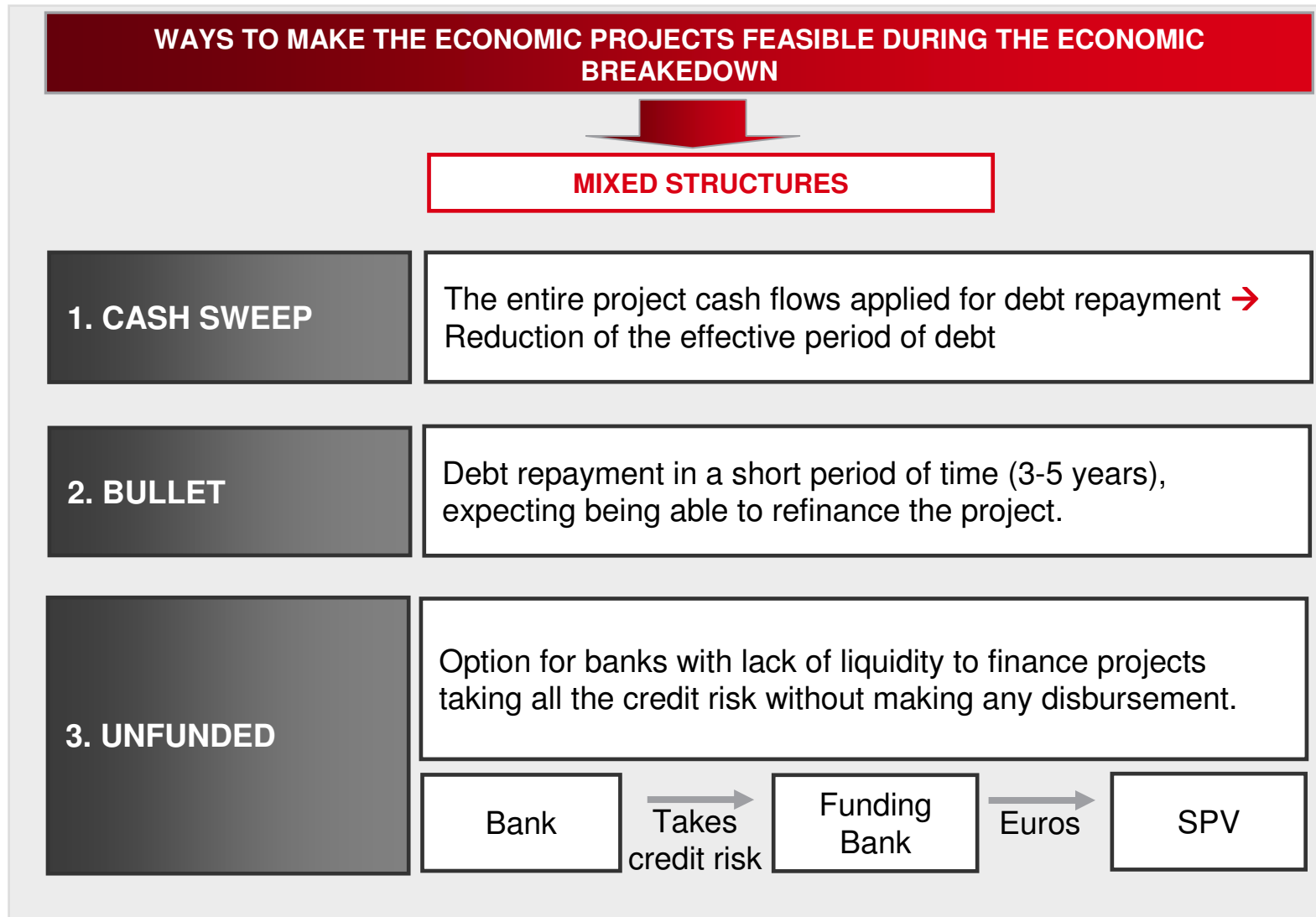
# 10. Current economic crisis (III)



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# 11. Alternative financing structures



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