

Tel Aviv, July 5th 2011

**The Photovoltaic Industry in Italy after the New
Legislation:
Investment Opportunities**

Financial Scenarios for PV plants in 2012

(PROTOS - G.Saraceno)

PROTOS' profile

PV Financial Scenarios in Italy 2012

Protos (1/2)

Protos was founded in 1985 as a collaborative initiative between an Italian insurance company, Assicurazioni Generali, together with banks and industrial groups.

Its objective was to create an independent organization with high technical capabilities, able to provide private and public clients with techniques and methodologies of an engineering and economic-financial character aimed at the planning, programming, analysis and monitoring of projects and investment programmes, related to the construction of building complexes, infrastructure and industrial and energy-producing plants.

Over the years, Protos has been active in Italy and abroad, working mainly on behalf of Financial and Insurance Institutes, carrying out analyses and monitoring of technical and environmental risks. It has expanded and developed its product lines including some concerned with Project Financing, and it has provided technical consultancy services for an overall value of investments estimated at more than 200 billion Euros.

Protos' goal is to provide an independent, accurate and transparent service that is able to temper project risks by means of appropriate controls and an in-depth analysis of risk factors that characterize the development of projects and/or investment programmes.

Protos (2/2)

The set up of the company follows an organizational matrix model (Industry/Business unit/Line of services) that can today count on a structure comprising around 50 highly qualified technical resources that operate throughout Italy, most of which have been specially selected from the best civil and plant engineering concerns.

The high standard of quality, the multi-sectorial technical and management capabilities of resources, the social structure, the strictly maintained level of independence (the company does not perform, directly or otherwise, any engineering activities and nor does it oversee any building works or the production of designs etc.). This has enabled the company to reach a high level of accreditation, including at international levels.



In 2010, according to the Infrastructure Journal, **Protos ranked 4th globally as a provider of Technical Advisory Services in Renewable Energies.**

Rank	Company	Total US\$m	Transactions	Market Share (%)
1	Garrad Hassan	6,041.60	15	33.95
2	Mott MacDonald	2,829.65	7	15.90
3	Fichtner	1,570.38	9	8.82
4	Protos	1,364.95	38	7.67
5	SgurrEnergy	1,247.46	6	7.01
6	Altermia	824.16	4	4.63
7	Germanischer Lloyd Wind Energy	720.00	1	4.05
8	RW Beck	709.08	2	3.98
9	Black & Veatch	443.43	5	2.49
10	DNV Global Energy Concepts	318.90	1	1.79

Protos' role

Project Financing and structured finance: As far as these areas are concerned, Protos carries out technical-environmental and insurance-related Due Diligence and Advisory and monitors/supervises/controls the building and management of both large projects (> 30 million Euros) for infrastructures and plants and small and medium projects (3-30 million Euros).

This involves working alongside divisions within Banks and Insurance Companies and, as far as small and medium projects are concerned, mainly involves projects for renewable energy sources, property and small local infrastructures.

Engineering and technology Insurance and deposits: Protos carries out preventive technical analyses (matrix/risk advisor) and technical monitoring and control during building, with the main purpose of normalizing specific risk.

Banks, Finance Corporations, Developers, Investment Funds: Protos is responsible for preventive technical, administrative and economic and financial sustainability analyses for projects regarding infrastructures and plants, Advisory on specific technical/contractual aspects, technical and environmental Due Diligence, technical monitoring/supervision and control and energy optimization during the design/execution stage of a project.

Under special circumstances, Protos will take on the difficult task of Project Management.

Protos' services for PV

Pre-financing Advisory	Site Assessment Contractor Selection Contract Definition Business Plan Modelling Authorization Assessment Plant Portfolio Appraisal
Structuring Advisory	Technical Due Diligence Insurance Due Diligence
Plant Construction Advisory	Construction Monitoring Work Progress Certification (SAL) Provisional Acceptance Supervision Final Acceptance Supervision Provisional Acceptance Test Final Acceptance Test
Plant Operation Advisory	Operation Monitoring Operation Assessment
Technology & Engineering Advisory	PV Module Factory Audit

PROTOS' profile

PV Financial Scenarios in Italy 2012

Financial Scenarios – Benchmark across Europe

2011 revenues (normalized for Italy "heq", across 20 year period)

	Italy €/MWh	Germany €/MWh	Spain €/MWh	France €/MWh
3 kWp	510	230	350	290
200 kWp (rooftop)	450	180	230	110
2000 kWp	350	130	140	100

Financial Scenarios – Benchmark across Western Europe

2013 revenues (normalized for Italy “heq”, across 20 year period)

	Italy €/MWh	Germany €/MWh	Spain €/MWh	France €/MWh
3 kWp	380	190	290	220
200 kWp (rooftop)	290	110	190	90
2000 kWp	190	90	110	90

Financial Scenarios – Benchmark across Europe

Italy is still one of the places with the highest Incentive Tariffs for PV plants.

Recent decrees clarified the intention to penalise “large, on ground plants” and to promote “small and distributed rooftop plants”.

Such principles are clearly derived from the analysis of the charts reported in the following slides for plants having 2012 incentive tariffs.

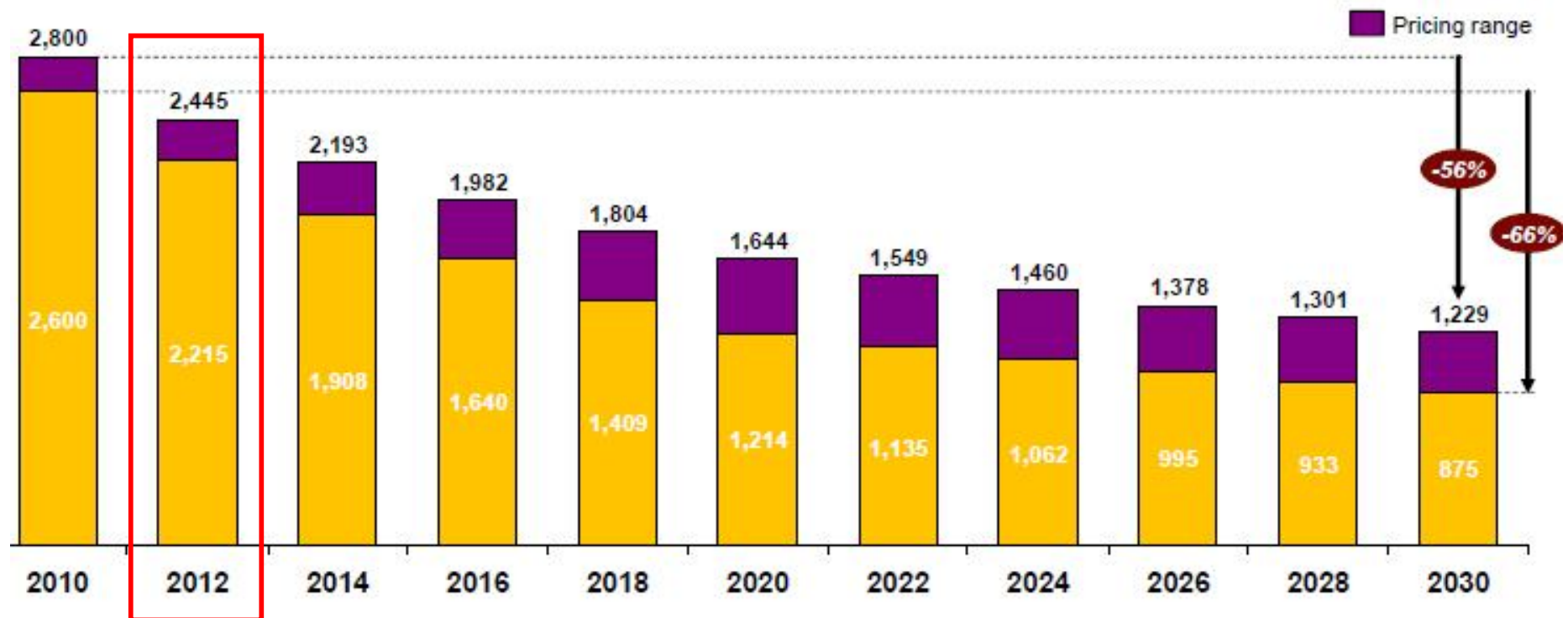
Financial Scenarios - Plants Entered into Operation within 2012

- Plant Size: 1 MWp
- Plant Type:
 - Rooftop
 - On Ground, fixed
- Incentive Tariffs [€/kWh]:
 - H1-2012:
 - 0,224 [Rooftop] - 0,172 [Ground]
 - H2-2012:
 - 0,202 [Rooftop] – 0,155 [Ground]
- Financing through LEASING
- Equity/Debt = 20/80
- CAPEX = 1.800 to 3.200 k€/MWp (today: 2.700 – 3.200 k€/MWp; see also next slide)
- OPEX = 40.000 €/MWp/year
- Equity IRR target = 12%

	1° SEM. 2012		2° SEM 2012	
	Impianti sugli edifici	altri impianti fotovoltaici	Impianti sugli edifici	altri impianti fotovoltaici
	[€/kWh]	[€/kWh]	[€/kWh]	[€/kWh]
1<P≤3	0,274	0,240	0,252	0,221
3<P≤20	0,247	0,219	0,227	0,202
20<P≤200	0,233	0,206	0,214	0,189
200<P≤1000	0,224	0,172	0,202	0,155
1000<P≤5000	0,182	0,156	0,164	0,140
P>5000	0,171	0,148	0,154	0,133

Financial Scenarios - Plants Entered into Operation within 2012

Regarding CAPEX, a study from EPIA (2010) forecasts the price for PV plants in 2012 in the range 2.200 – 2.400 €/kWp



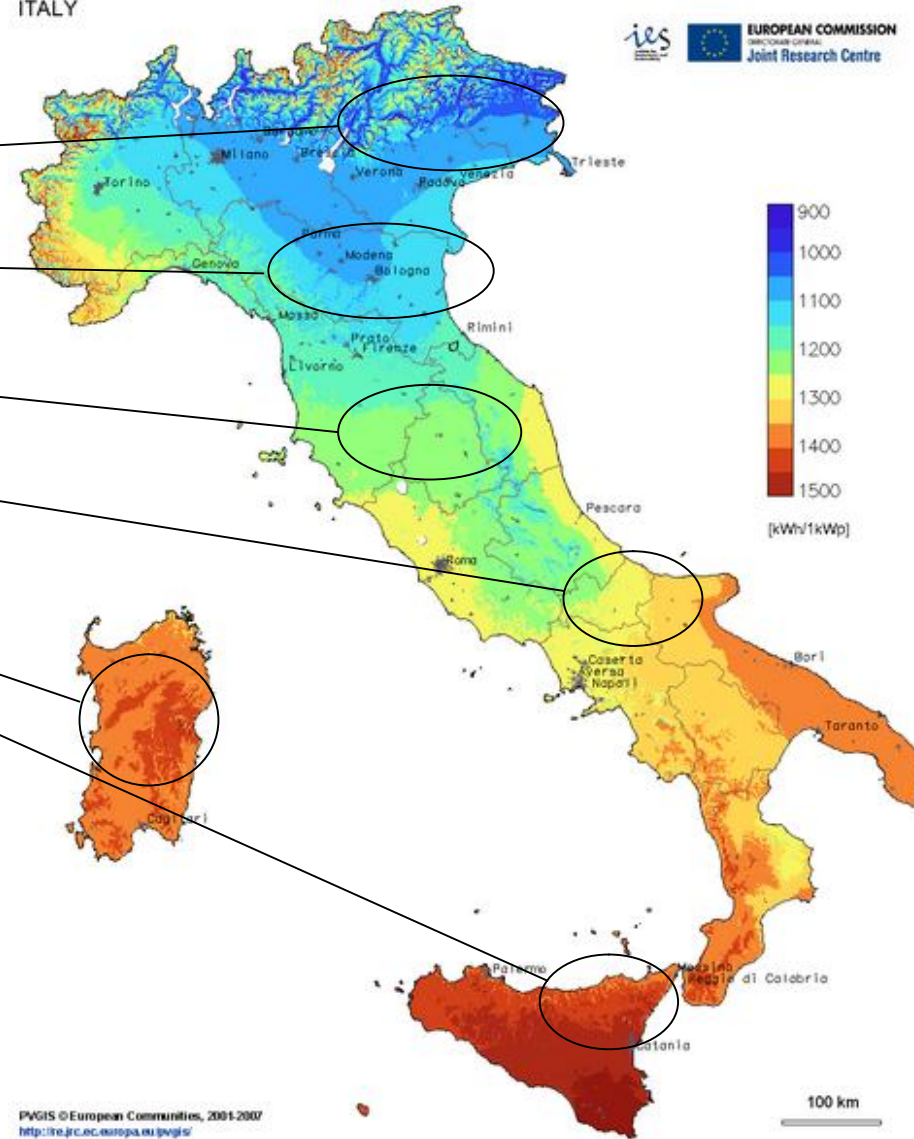
Financial Scenarios – Plant sites

Yearly sum of solar electricity generated by 1kWp photovoltaic system with optimally-inclined modules
ITALY



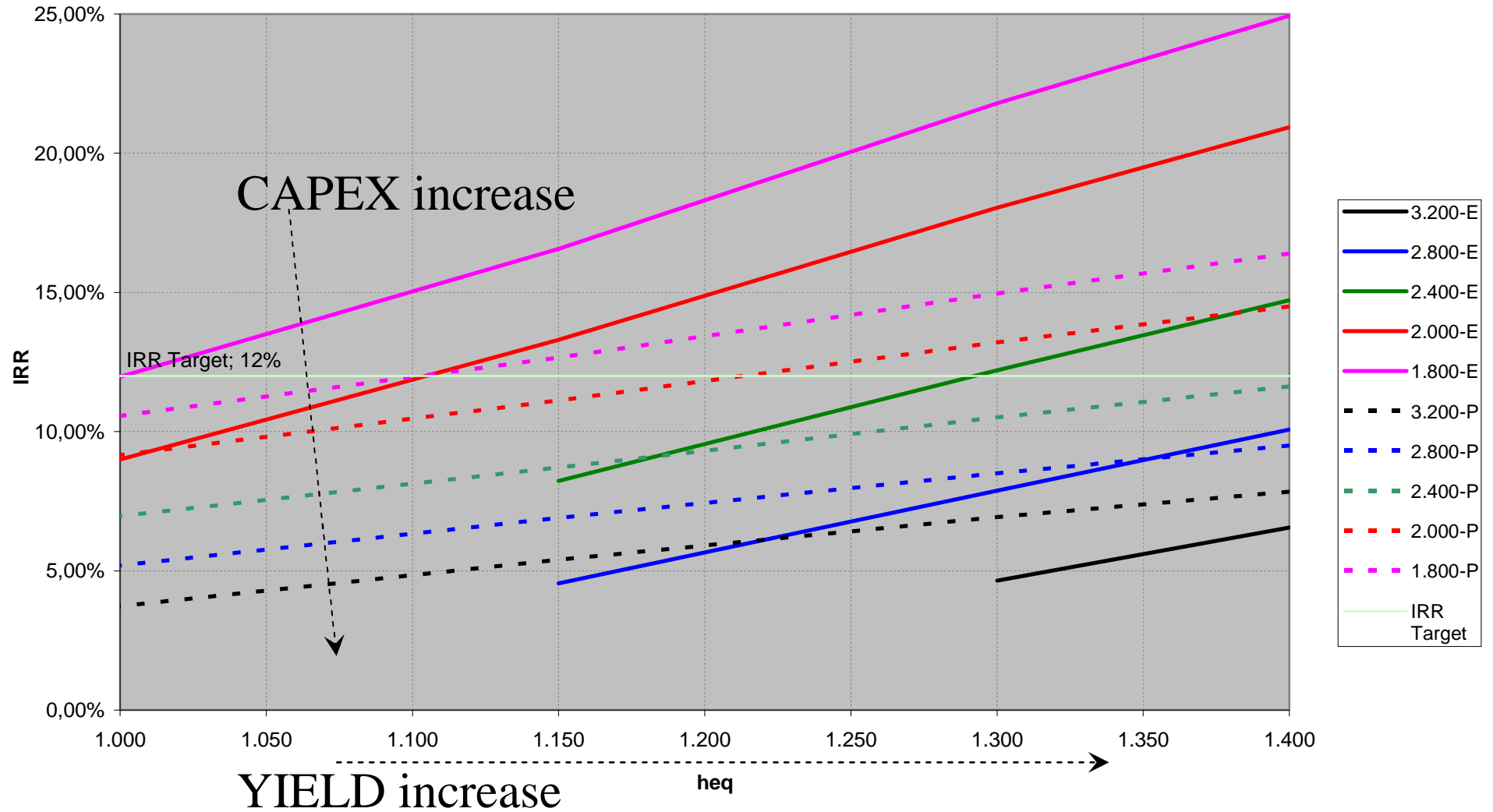
- Plant Sites from 1.000 to 1.400 heq

- 1.000
- 1.100
- 1.200
- 1.300
- 1.400



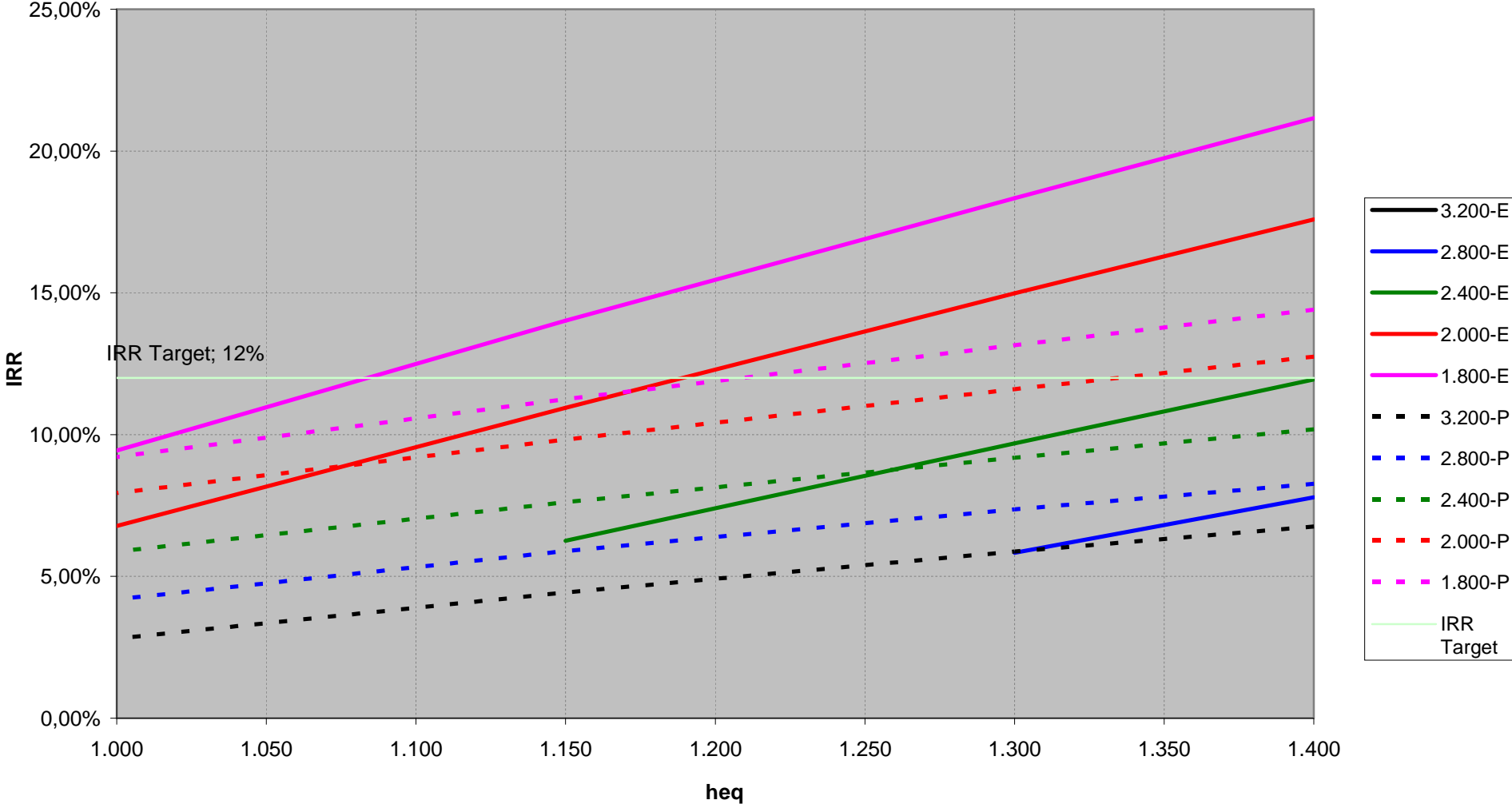
Financial Scenario 1 – Rooftop plants, H1 2012

IRR Project vs. Equity (Rooftop - H1 2012)



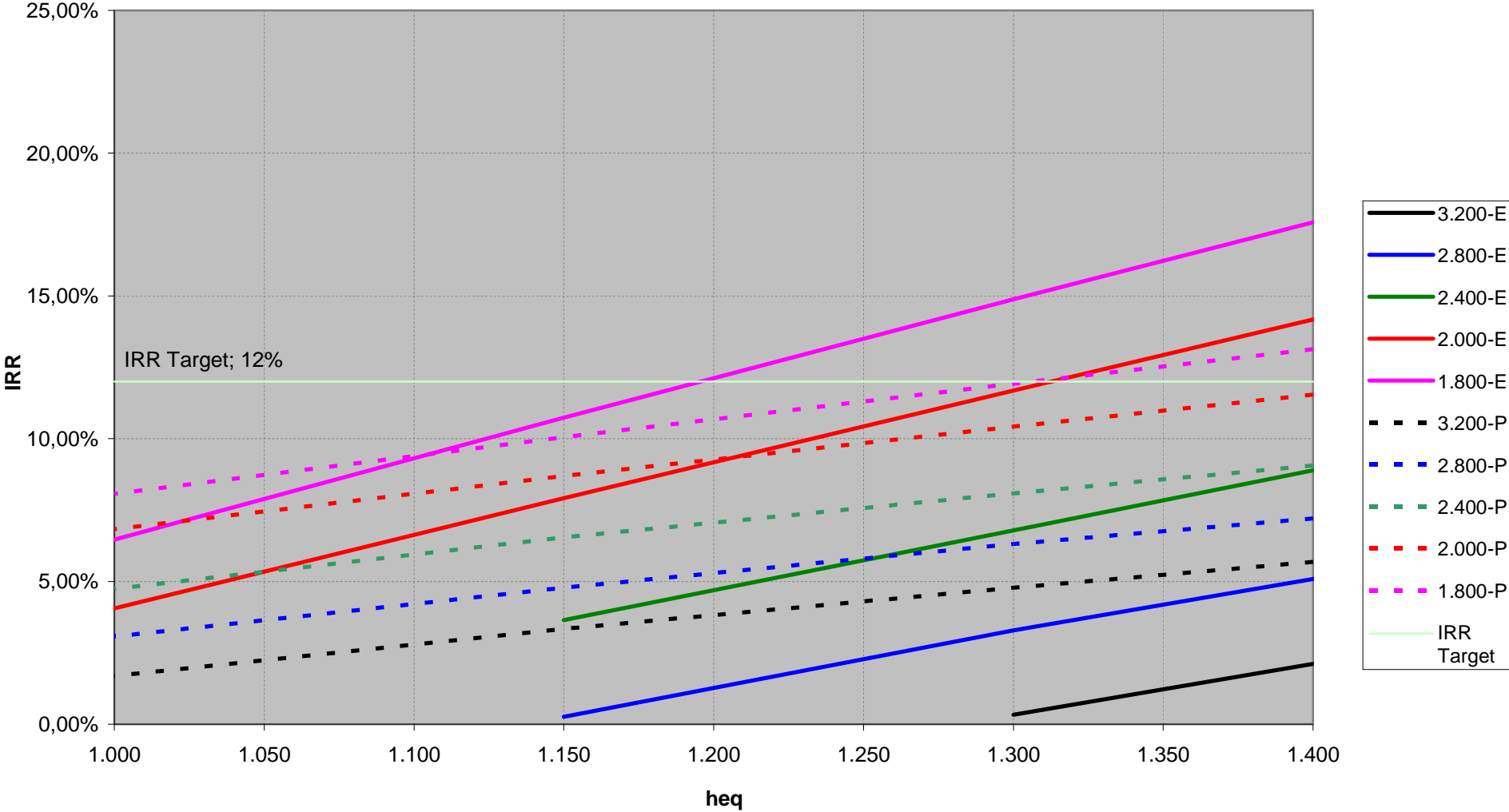
Financial Scenario 2 – Rooftop plants, H2 2012

IRR Project vs. Equity (Rooftop - H2 2012)



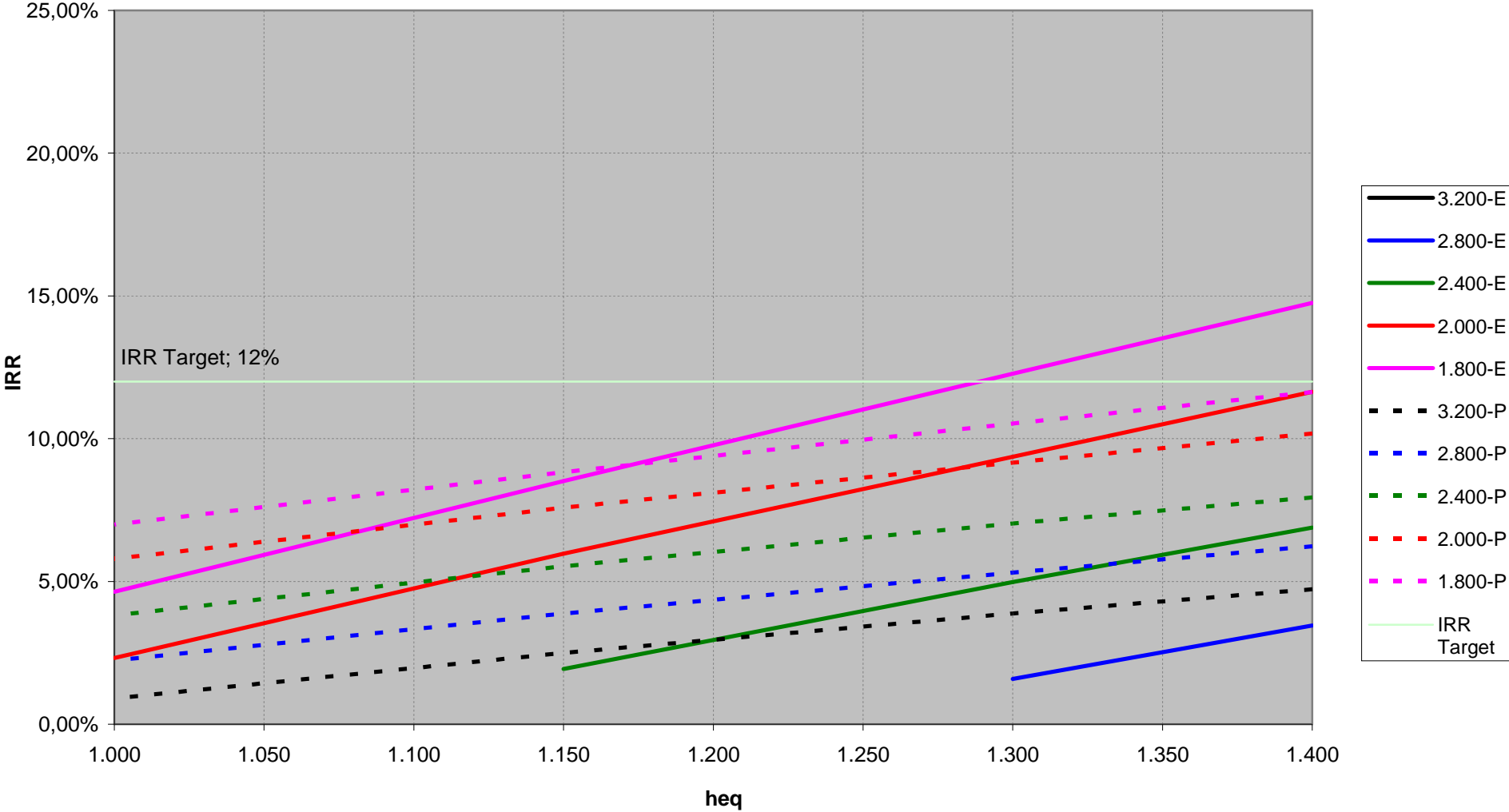
Financial Scenario 3 – On Ground plants, H1 2012

IRR Project vs. Equity (On Ground - H1 2012)



Financial Scenario 4 – On Ground plants, H2 2012

IRR Project vs. Equity (On Ground - H2 2012)



Financial Scenarios - Conclusions

For the expected pricing range of PV plants in 2012:

- rooftop installations allow investors to achieve and exceed target IRR across a wide range of sites (central and southern Italy) throughout all 2012
- ground-mounted plants continue to be an interesting investment only in high-irradiation regions (southern Italy) and in the first half of 2012

Investments on second half of 2012 could prove to be ineffective for some type of plants and installation sites, unless Italian PV market experiences a larger than expected price decrease.

PROTOS