

**Solarize Salem**



Shared buying co-op for  
residential solar pv installations  
August-October 2010



# Solarize Salem modifications

- Two contractors



- Two systems
  - Oregon-made \$5.50 per watt
  - Foreign-made \$5.35 per watt
- Marketing fee to contractors \$4000
- Membership fee to homeowners \$.10 per watt



# Solarize Salem media

## FROM YOUR COMMUNITY

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Salem

### More than 100 sign up for solar co-op

More than 100 local homeowners signed up for the Salem-area solar energy co-op on its first day Monday.

Solarize Salem is a grassroots effort to bring solar-electric panels to area homes at a bulk rate. The nonprofit selected two contractors to install the panels: SolarCity, Oregon's first full service solar provider and RS Energy, an Oregon construction firm.

Residents can sign up for the program through Oct. 1 for an installation rate of \$5.50 per watt. Similar programs in Portland, Pendleton and Beaverton have brought solar energy to hundreds of Oregon residents at a discounted rate.

Project coordinator Ross Swartzendruber was excited about the early interest.



THOMAS PATTERSON | Statesman Journal

*Solarize Salem is a grassroots effort to bring solar-electric panels to area homes at a bulk rate.*

"Salem is hungry for solar energy," he said.

For information, go to

[solarizesalem.org](http://solarizesalem.org) or call Roy McCormack at (503) 507-2507.

— Stefanie Knowlton

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# Solarize Salem media

## Group hopes to spark **SOLAR SURGE IN SALEM**

100 homeowners sought for project; they would unite to get lower rates

BY STEFANIE KNOWLTON  
Statesman Journal

A Salem group wants to bring solar electric panels to 100 homes in Salem by next year.

Solarize Salem is based on a grass-roots model founded in Portland and now spreading to other cities in Oregon and throughout the country. The effort has ignited a solar boom that has more than doubled installations in Oregon since 2008.

The basic idea starts with a community group organizing a campaign to connect homeowners interested in solar power. They find a contractor, attend educational workshops and as a group get a bulk rate that saves 10 percent to 30 percent. When residents combine that with federal and state incentives, the cost comes down significantly.



THOMAS PATTERSON | Statesman Journal

Dan Guttridge (left) and Randy Sunset of 3-D Electric install solar panels on a house in Southeast Portland. Solarization projects are in the works throughout the region.

increase in solar installations," said Lizzie Rubado

**Details about Solarize Salem's program**



# Solarize Salem media

SALEM PROVING A HOT MARKET FOR SOLAR ENERGY

## Co-op aids residents who want to tap sun

Saturday homes tour might generate even more interest

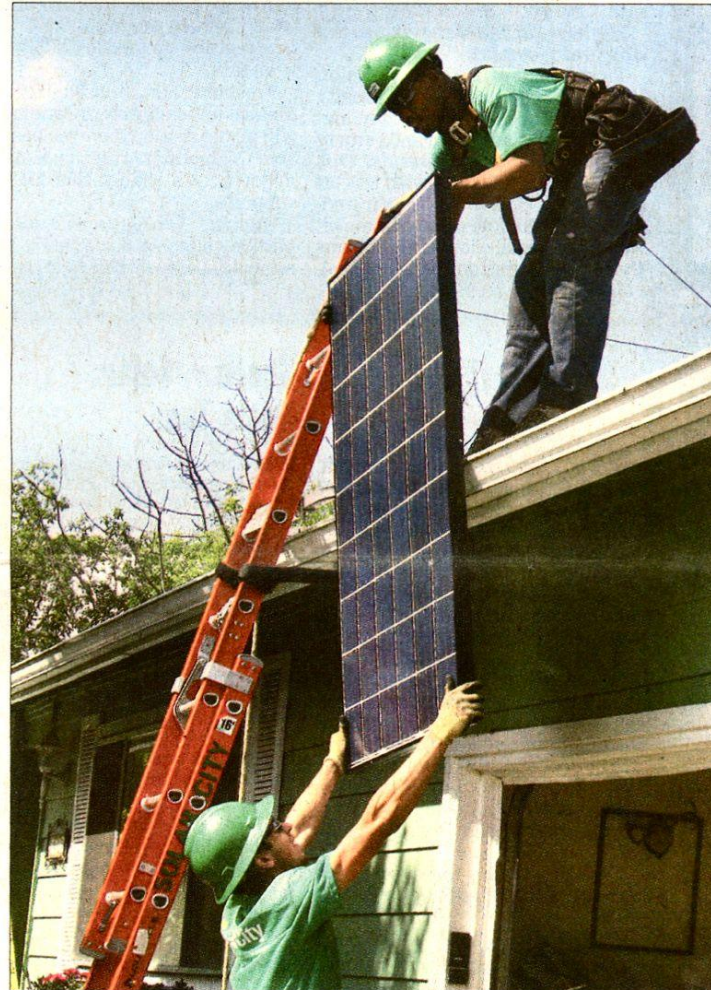
BY STEFANIE KNOWLTON  
Statesman Journal

For years local resident Roberta Martin daydreamed about installing a solar electric system, so when she heard about a local group trying to make it more affordable, she jumped at the chance to join.

"I was on the horn immediately," she said.

Now, about two months later, Martin is the proud owner of a 3.2 kilowatt solar electric system perched on top of her home east of Salem. It cost about \$17,000, but Martin hopes the price will come down to \$4,000 after rebates and tax credits.

"I'm just thrilled," she said



KOBBY R. BLAIR | Statesman Journal

SolarCity technicians Cameron Teuni (left) and Gerry Jones install solar panels Tuesday at a northeast Salem home.



# Solarize Salem media

## Homeowners band together to go solar

By Tracy Loew  
USA TODAY

SALEM, Ore. — Nancy Arntson spent a year thinking about installing solar panels at her home.

It wasn't until her neighbors decided to take the plunge together — generating significant savings — that she made up her mind to do it.

"It takes the right financial incentive to make it happen," Arntson said.

The group of neighbors, called "Solarize Salem," is the latest in a wave of grass-roots efforts around the country to connect homeowners interested in solar power.

The homeowners attend educational workshops, buy solar panels in bulk and negotiate a group discount with a panel installer. The practice can save 10% to 30% off the



By Thomas Patterson, Statesman Journal, via AP

**Solar project:** Dan Guttridge, left, and Randy Sunset of 3-D Electric install solar panels July 22 in Portland, Ore.

cost of installation. Additional savings come from local, state and federal rebates and tax deductions, which can bring down costs significantly.

In Salem, Arntson will pay \$2,067 for a 12-panel system with a price tag of about \$18,000, after state and fed-

eral tax credits, she said.

In Portland, Ore., a similar neighborhood effort proved so popular it has spread across the state, project co-founder Tim O'Neal said.

"The hook is definitely the price. But beyond that, help navigating the incentives, tax

credits, technology, components, really made it a lot easier for most people," he said.

Solar installations have more than doubled since the first Portland project in 2008, said Lizzie Rubado of Energy Trust of Oregon, which handles state energy-improvement rebates. Last year, there were 363 installations, about half of which were community solar projects, she said. A round of projects in southeast Portland cost an average of \$20,000 each, but most homeowners will pay \$3,000 to \$4,000, she said.

Elsewhere:

► **In San Jose, Calif.**, a group of city employees and retirees partnered with a credit union and an installer to negotiate low-interest loans and discounts on installations, said Jessie Denver, the city's community solar pro-

gram coordinator.

► **In San Antonio**, the city will launch a program next month to connect neighborhoods with solar installers and banks offering low-interest installation loans, city spokeswoman Christine Chapman said.

Solar group programs have been launched in 16 cities in Arizona, California, Colorado, New Jersey, New York, Pennsylvania and Texas by a for-profit company called One Block Off the Grid, using a similar model. "If you get 200 people getting the same deal ... they're a lot more comfortable taking the plunge," company founder Dave Llorens said.

Loew reports for the *Statesman Journal* in Salem, Ore. Contributing: Stefanie Knowlton.



# Solarize Salem media

News

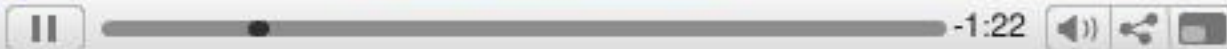
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## Salem neighbors share savings in solar program



**ROBERTA MARTIN**  
HOMEOWNER





# Solarize Salem results

- 400 sign ups
- 345 attended workshops
- 52 installations
- 165 kW installed
  - Oregon-made 2 to 1
  - 8 systems in Salem Electric territory
- 3 kW system donated to Salem-Keizer
- More than 500% increase from 2009





# Largest install 9.8 kW





# MEGAWATT PROJECT

Commercial  
Resource Management  
and  
Renewable Energy Program



# MEGAWATT PROJECT

Local manufacturers

Local installers

Clean Energy workforce



# MEGAWATT PROJECT

Barriers:

Uncertain financing

Lack of trained workforce



# MEGAWATT PROJECT

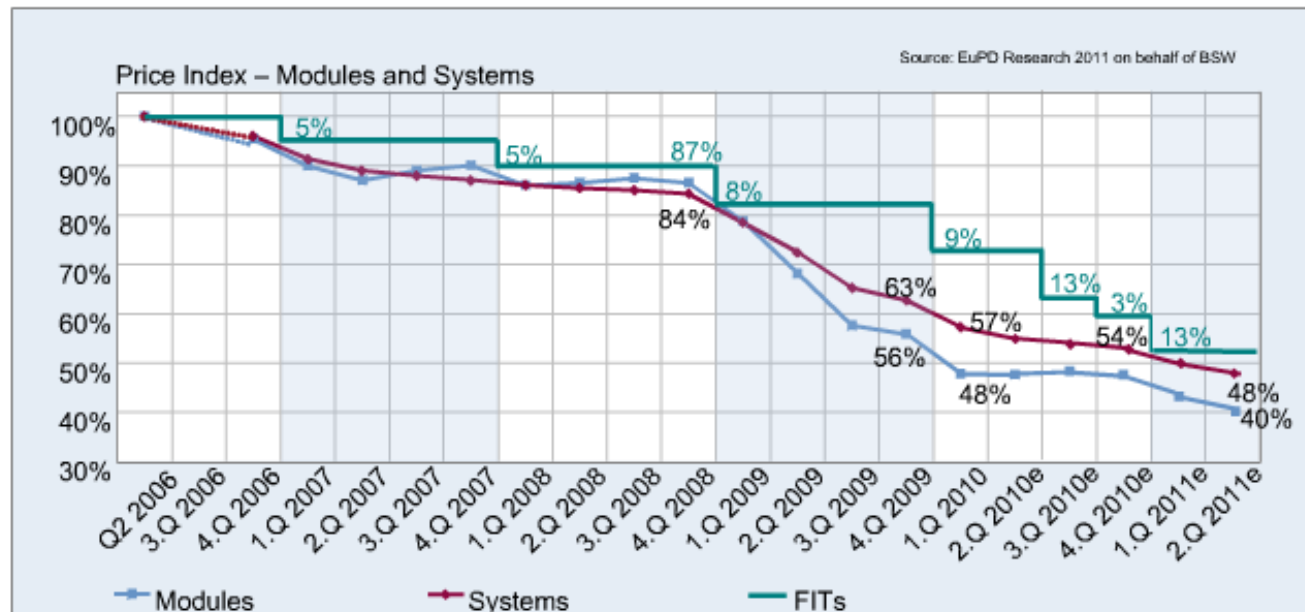
## Recommendations:

1. Extend BETC, RETC to establish feed-in-tariff (FiT) baseline
2. Accelerate FiT pv pilot
3. Open FiT to all renewables and sunset RETC, BETC

## I. German Market Outlook

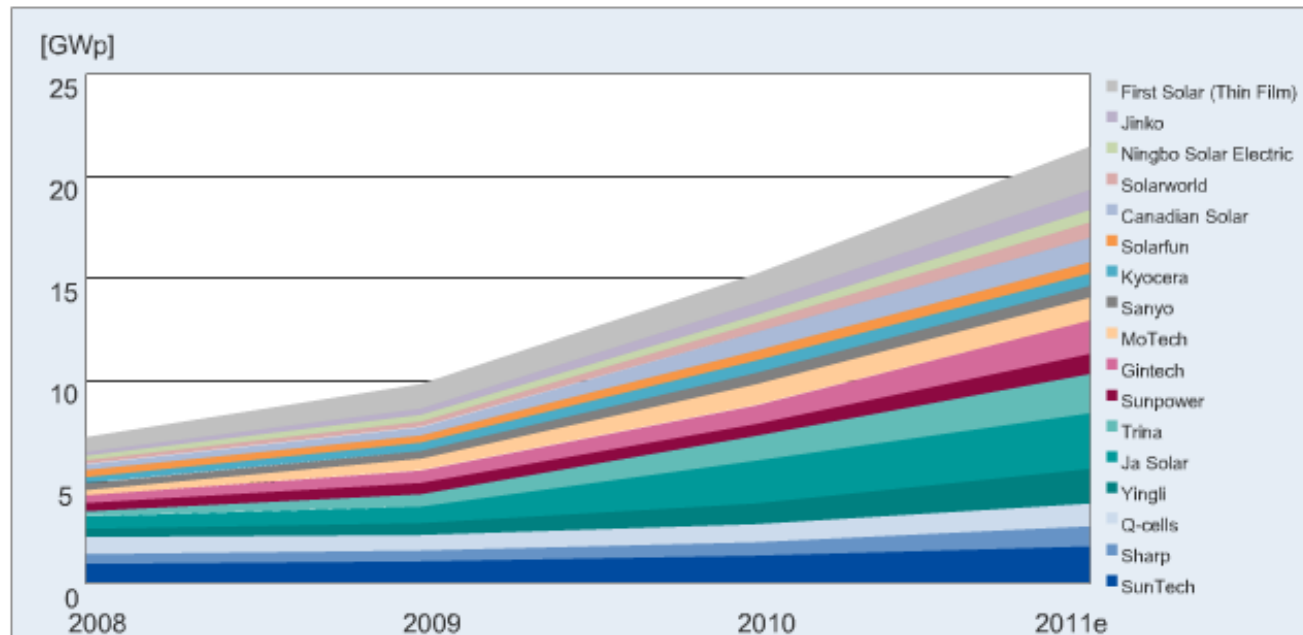
## PRICE DEVELOPMENT – INCREASING PRICE DIVERSITY

### 2010 prices



- The gap between the green and the red curve is becoming wider.
- Prices are already declining.
- Especially the gap between brands is increasing.

| SUPPLY: + 50 PERCENT COMPARED TO LAST YEAR



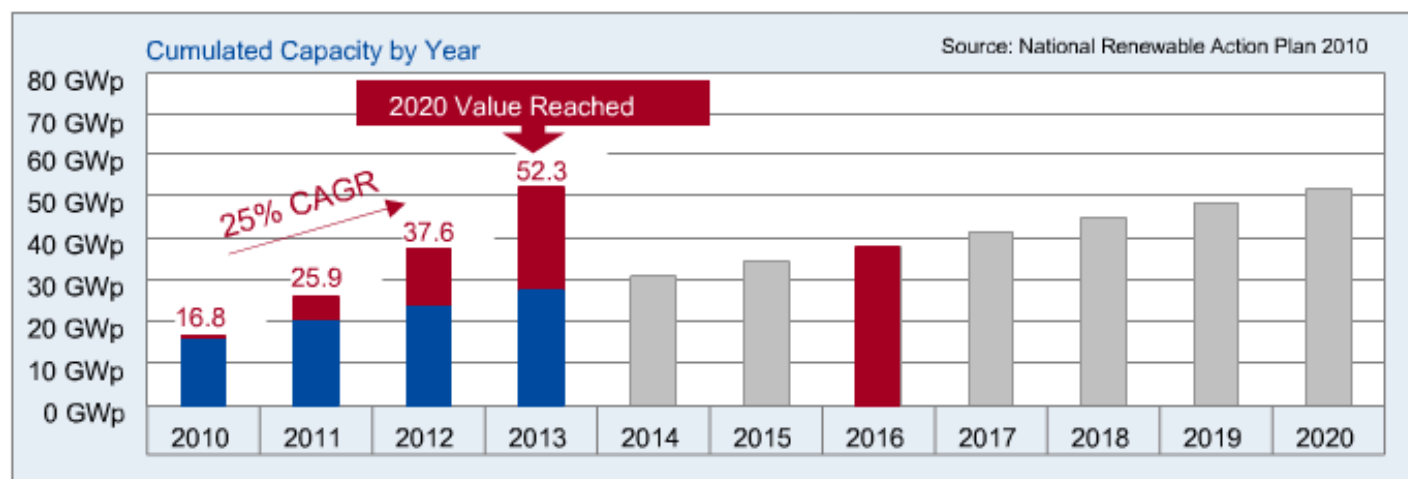
- Production capacities of biggest cell manufacturers grew from 9.8 GWp by the end of 2009 to 15.2 GWp by the end of 2010.
- Even if a moderate market growth is assumed the pieces of the cake become smaller.



## STARTING POINT II – AND WHERE WE ARE CURRENTLY HEADING

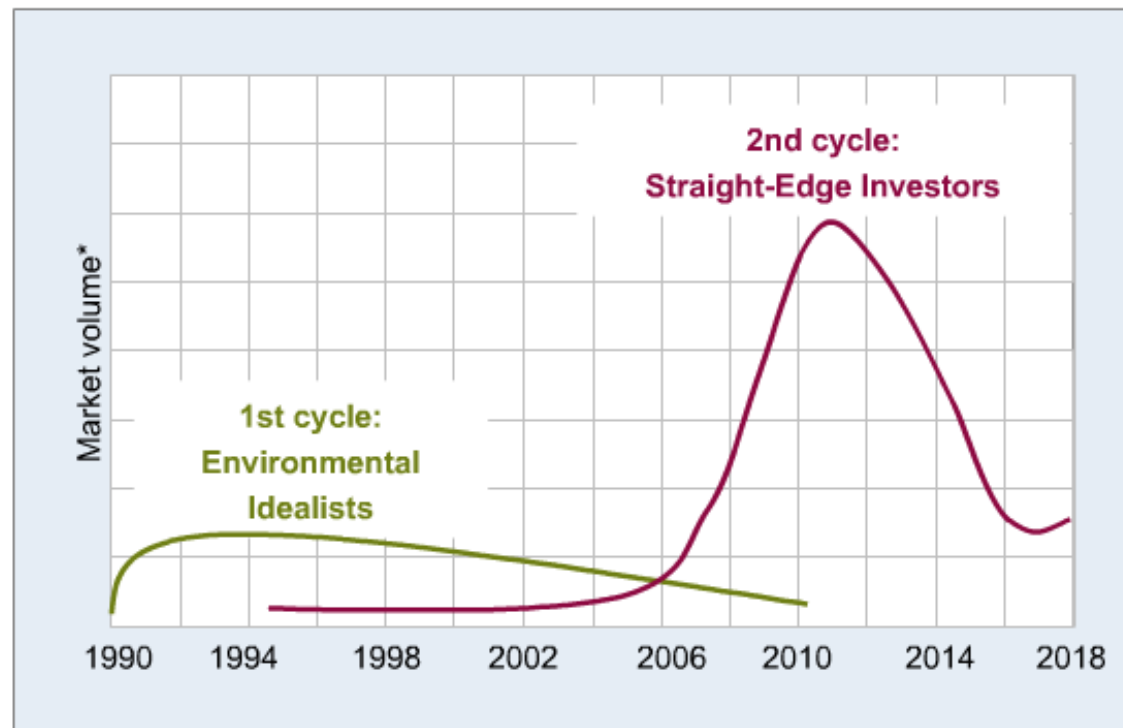
**If the market continues growing, the 2020 projections might be in close reach already**

- The 2020 projection of 52 GWp is based on an annually installed capacity of 3.5 GWp for years 2012 through 2020.
- If current installation volumes should continue to grow on a moderate level (25 percent) in the next two years, the 2020 projected installations could be reached as early as 2013.
- Even if new installations were to decrease by 20 percent YOY, the projected values will be reached no later than 2016.



## | THE ERA OF “STRAIGHT EDGE INVESTORS” IS COMING TO AN END

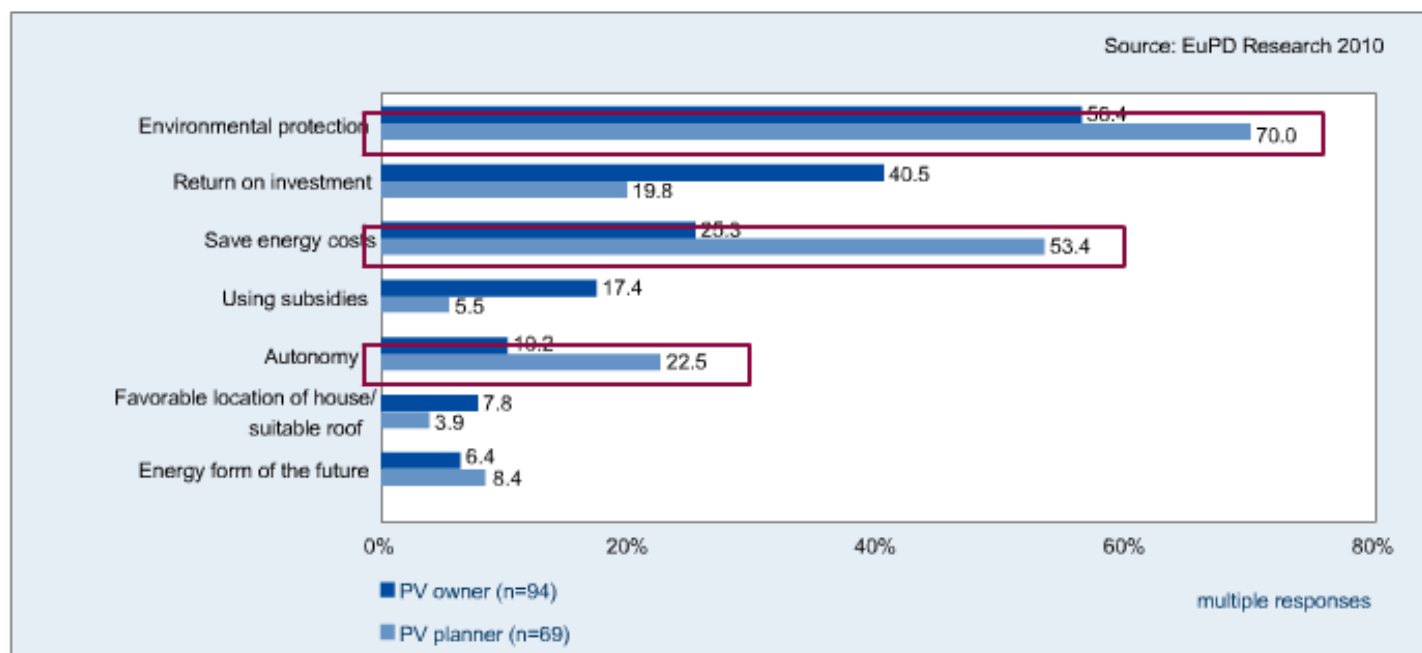
The IRR as the central market driver is losing ground



\* indicative

## NEW MARKET DRIVERS ARE ALREADY IN SIGHT...

### Reasons for the Purchase or Planning of a PV Plant (unaided)



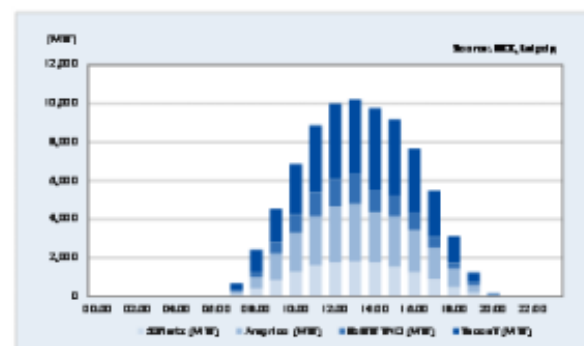
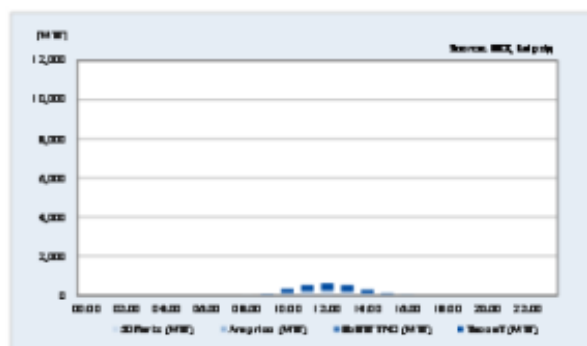
- Decreasing FITs and an increasing electricity price will lead to a paradigm shift from "making money" to "saving money"
- Net-metering and self-consumption are likely to benefit from this shift

| ...AND GRID PARITY IS ON THE HORIZON

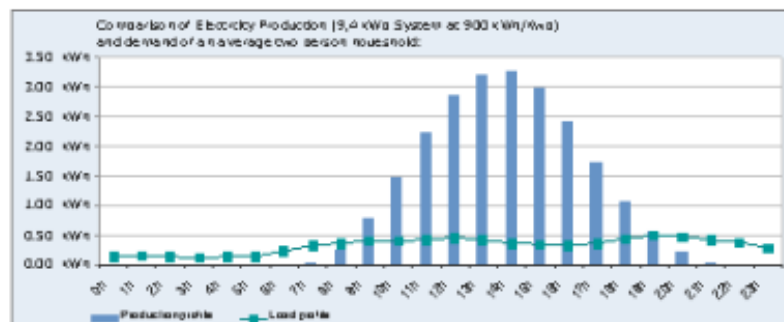


## HOWEVER, NO NEW ERA WITHOUT NEW CHALLENGES!

...on grid level: Integration of fluctuating electricity generated by PV into the grid

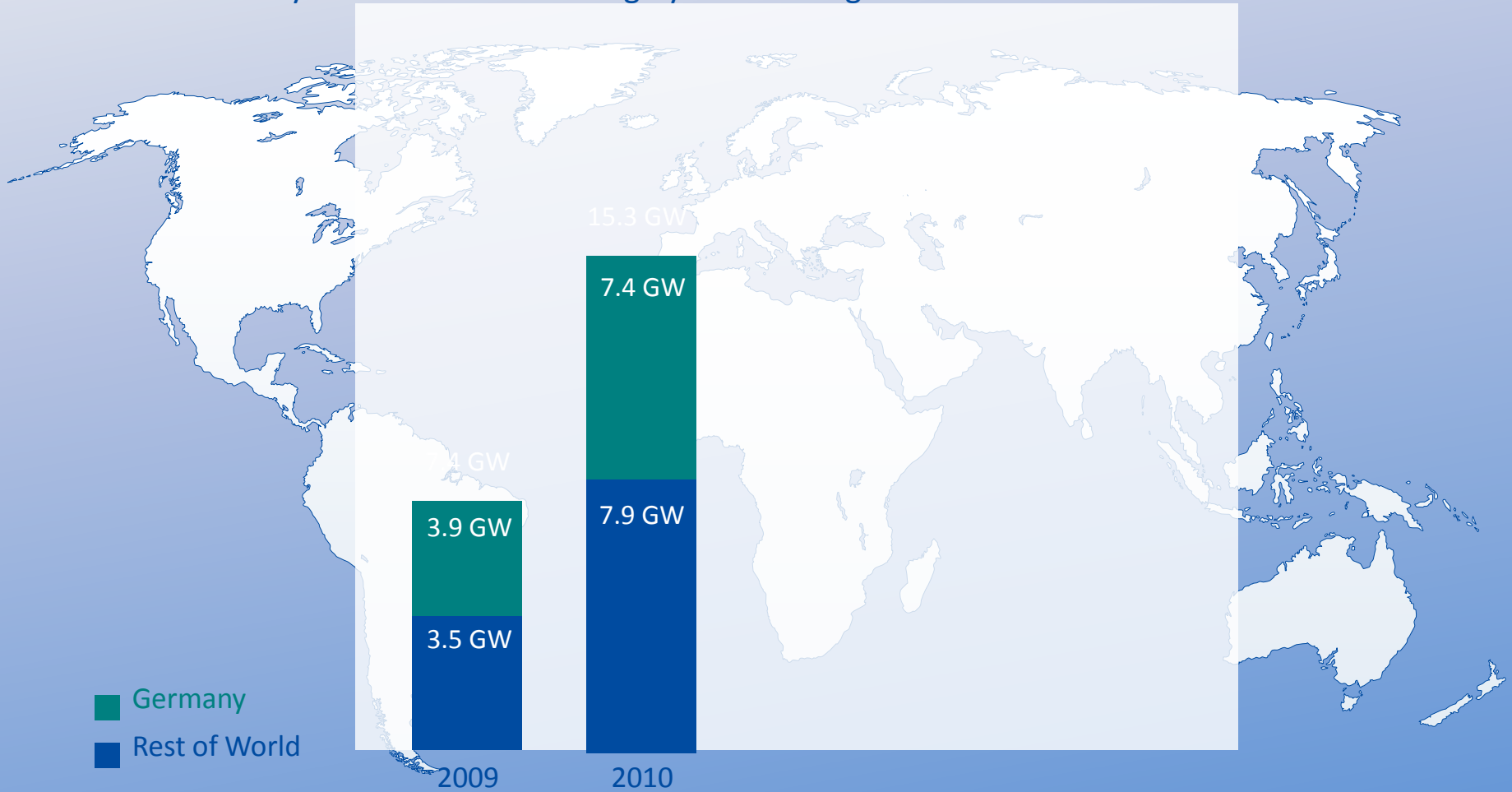


...on customer level: Different production & consumption patterns in households



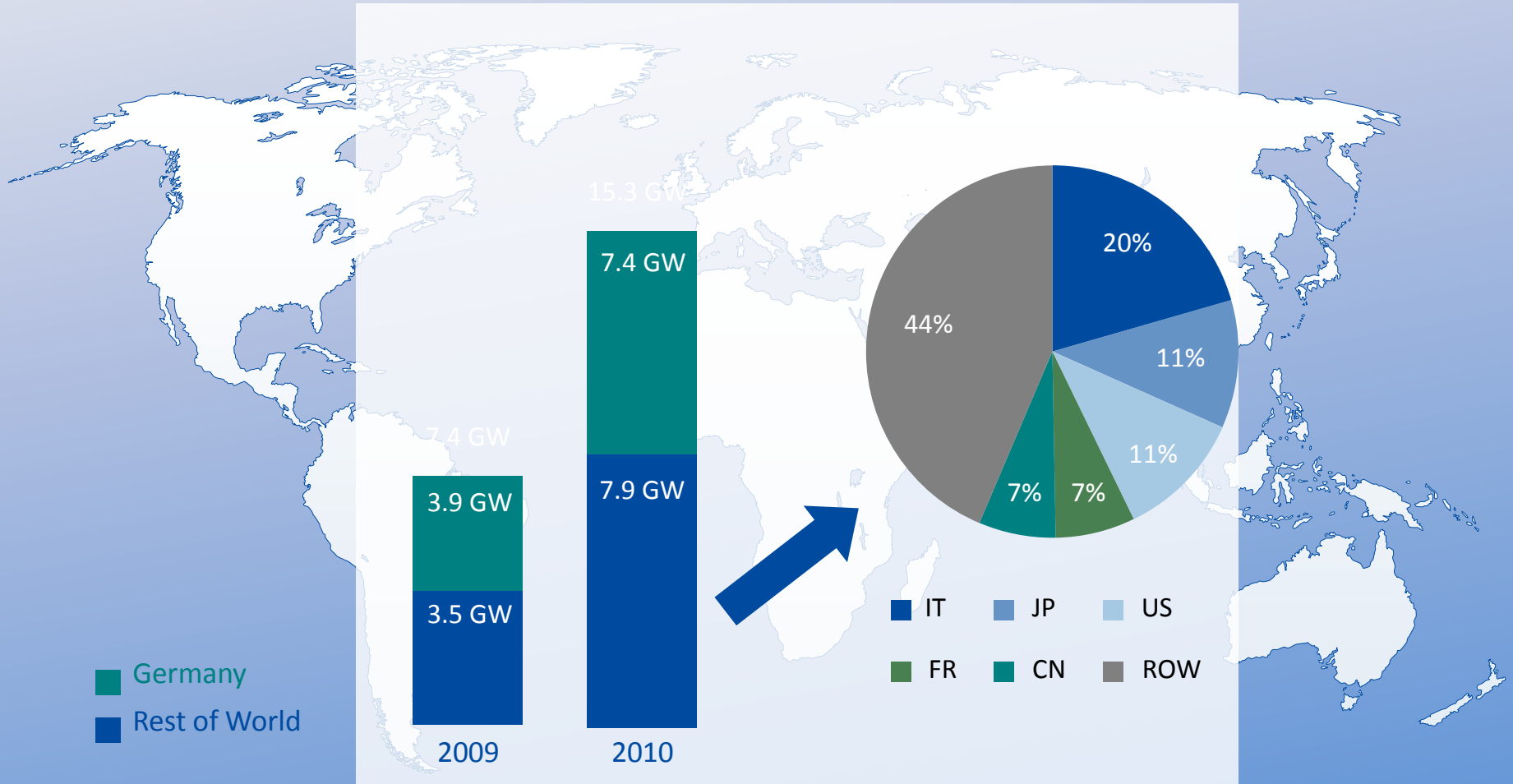
## High Market Concentration

So far Germany has accounted for roughly half of the global PV market.



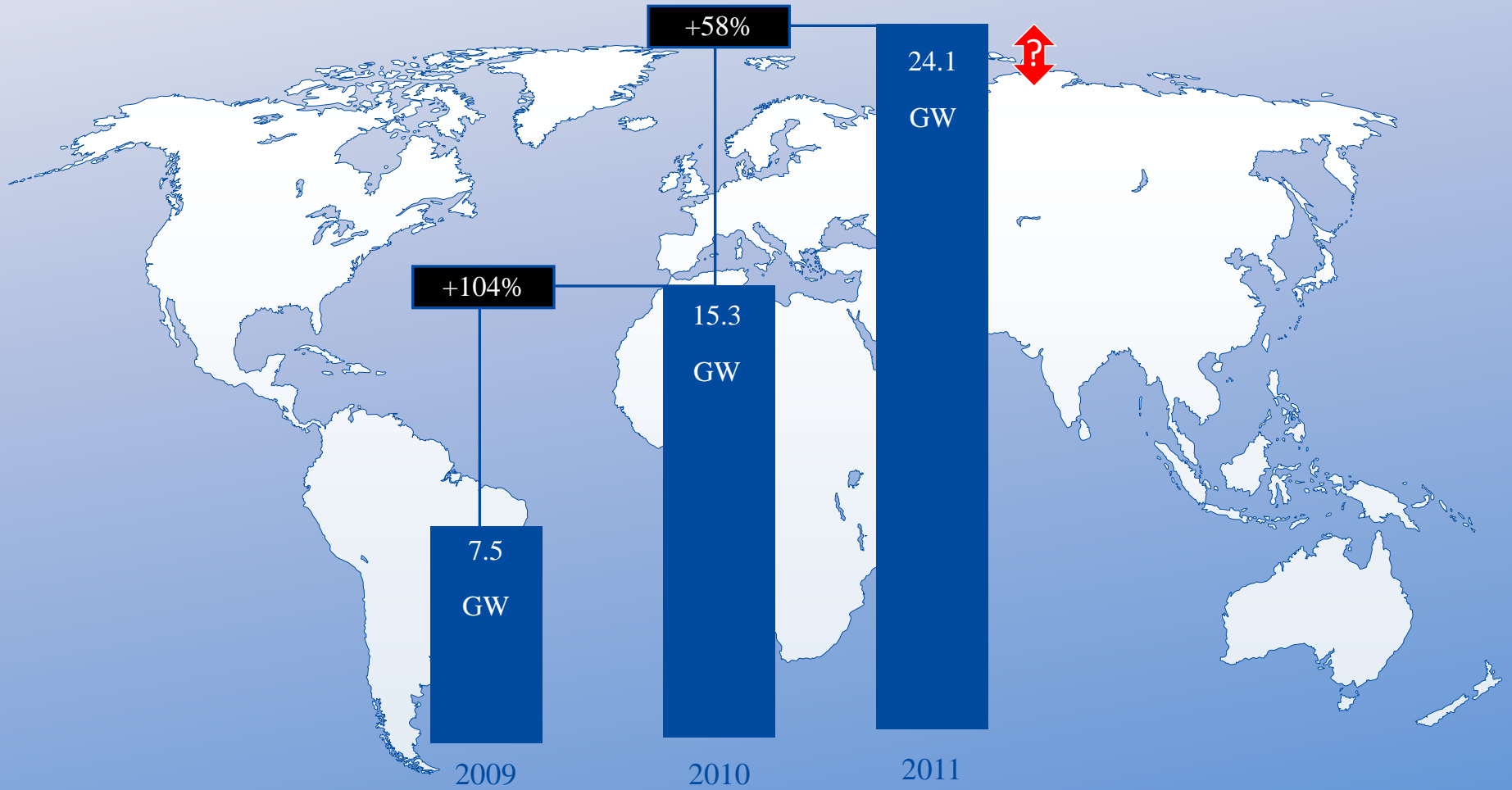
# High Market Concentration

The rest of the market is dominated by a small number of countries.



# Short-term Outlook

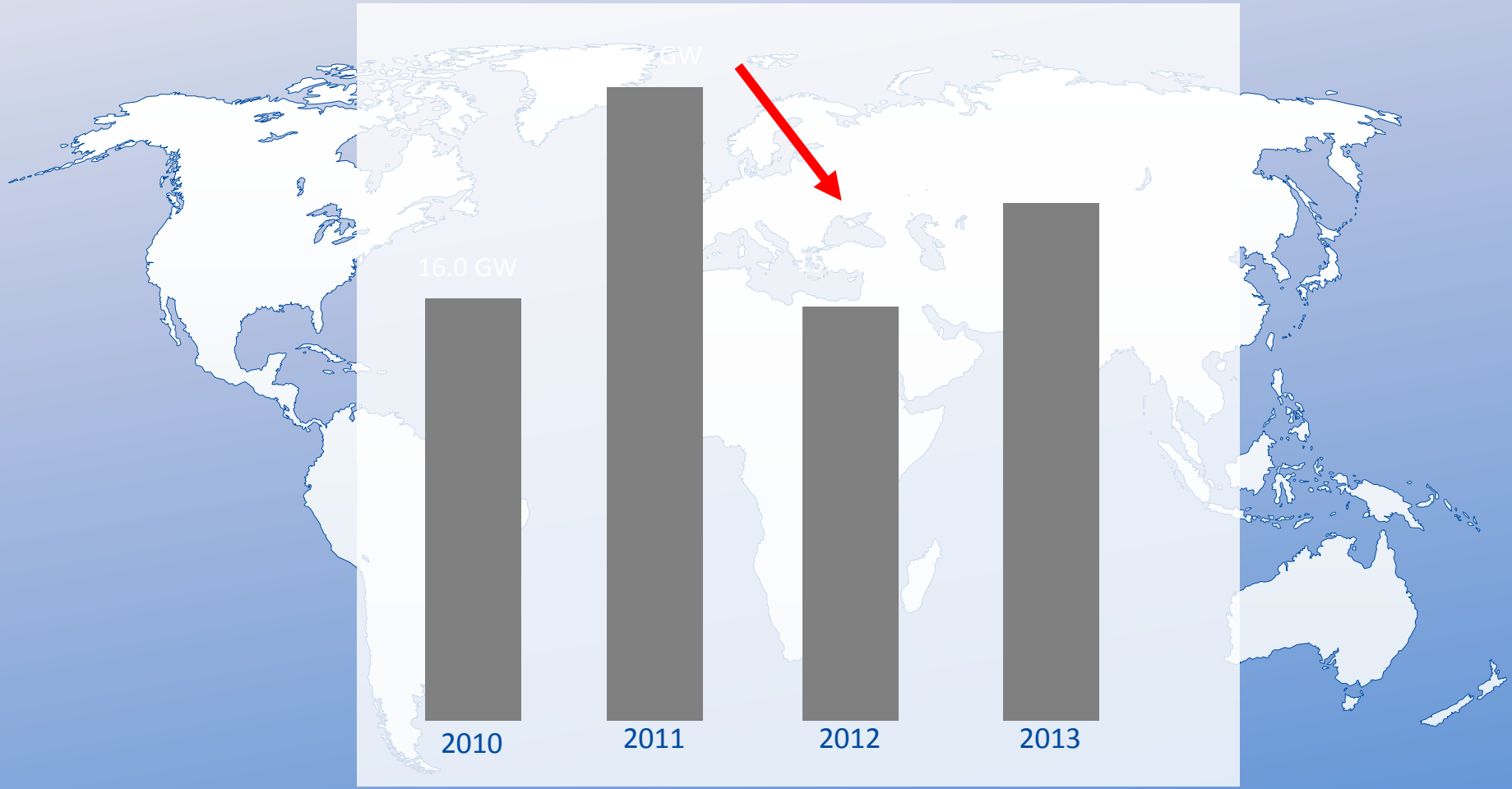
The global PV market will continue to grow this year.





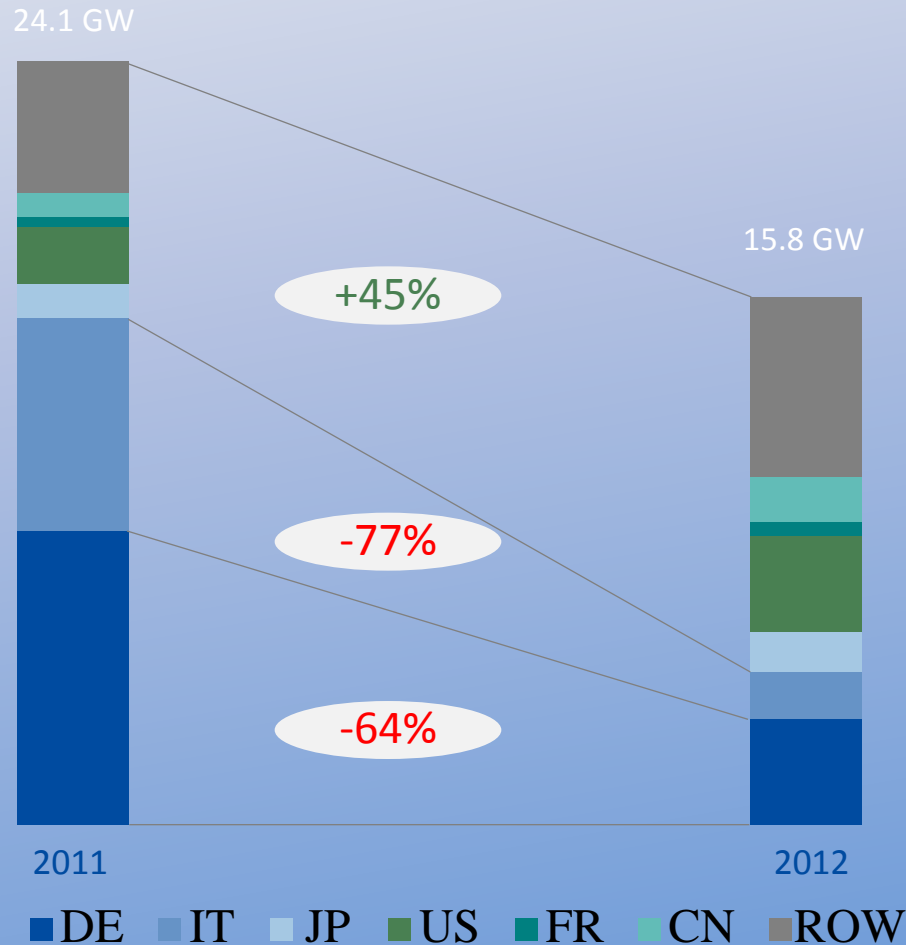
## 2012 and Beyond – Mid-term Outlook

The market is expected to shrink in 2012 but to enjoy growth the year after.



## Reasons for Reduction in 2012

Germany and Italy are responsible for driving down the global PV market.

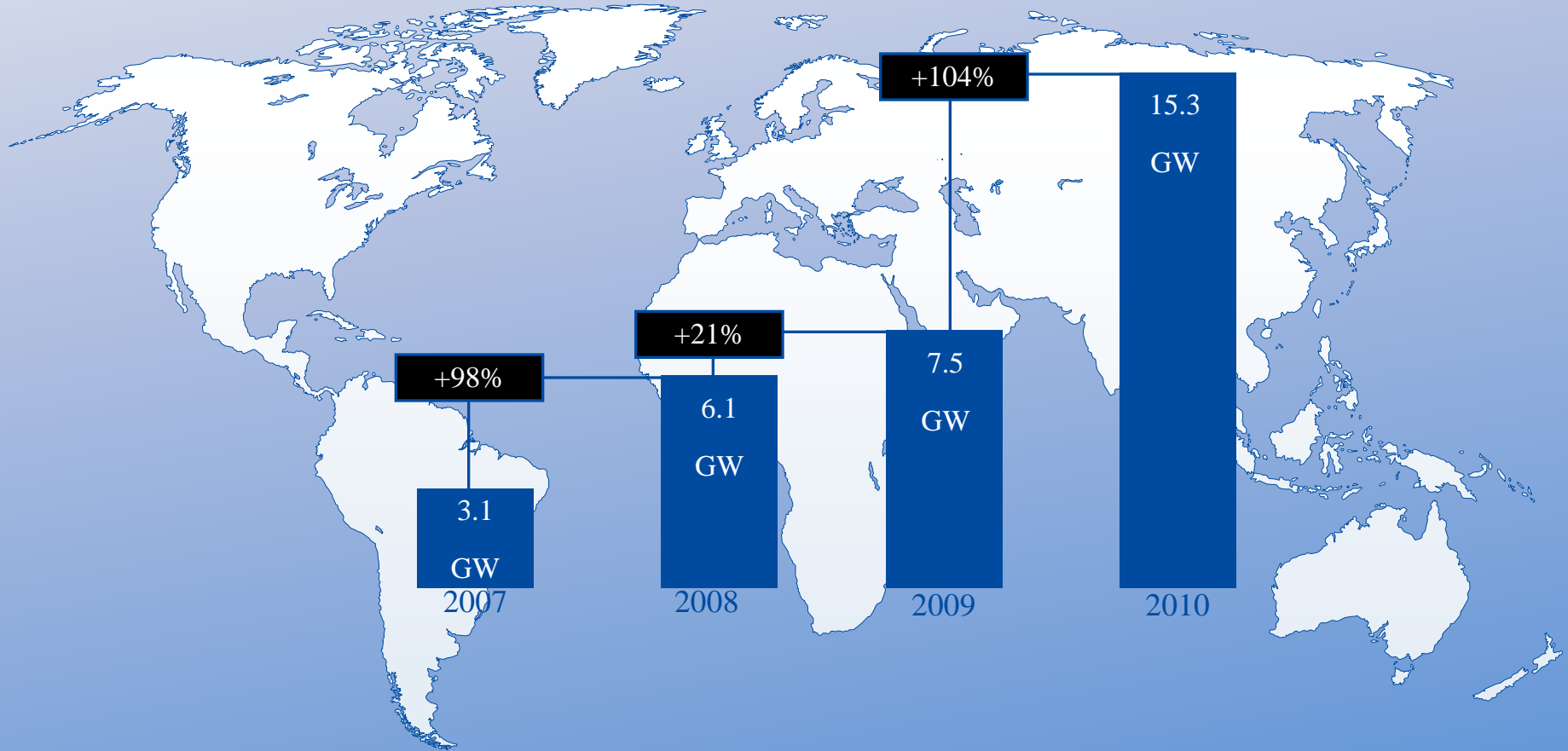


### Boom & Bust:

- Accelerated FIT reductions in Germany, the market is growing too fast.
- Inevitable cuts in Italy, market booms this year but the goal set for 2020 has already been achieved.

## History – Status Quo

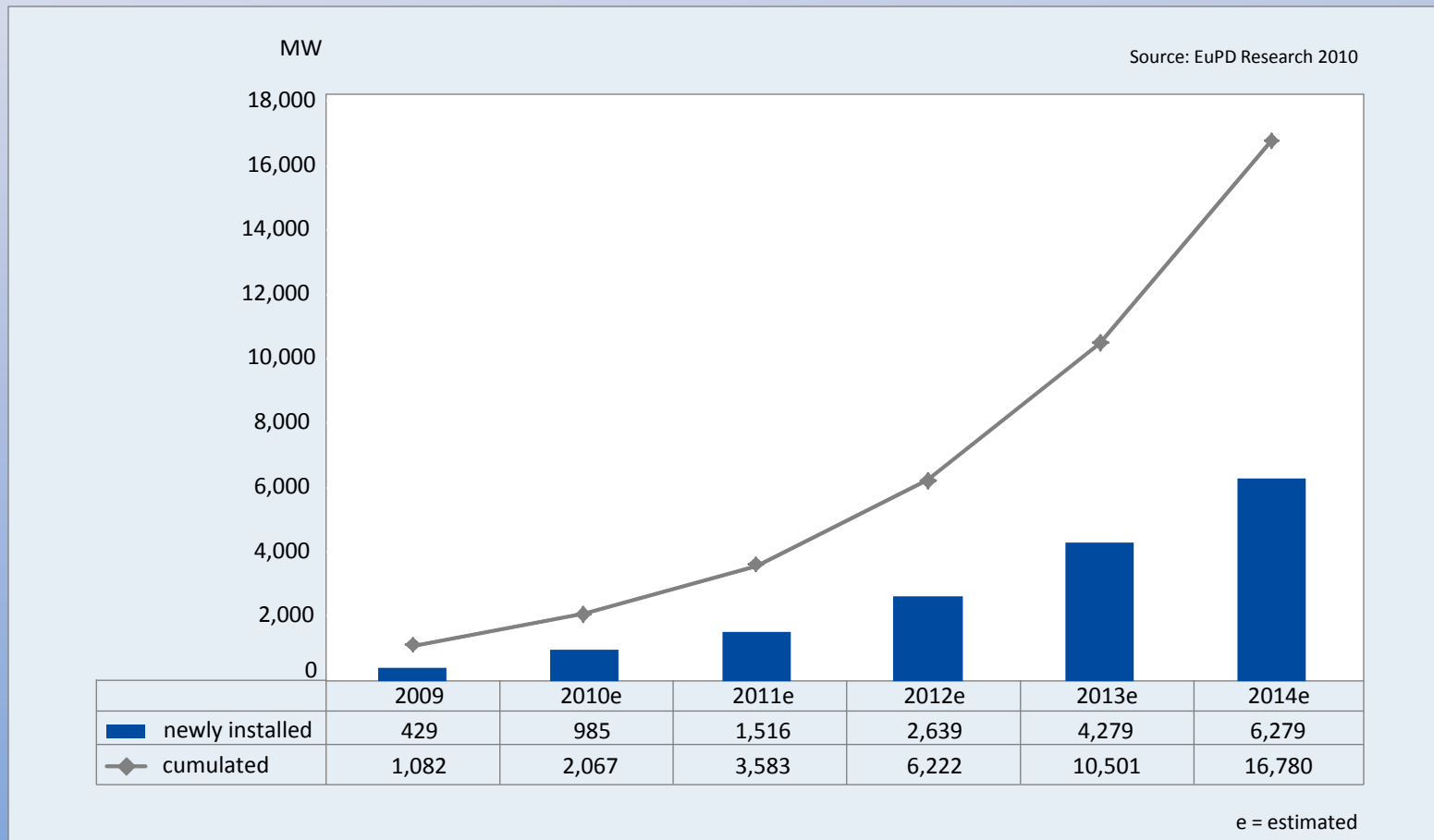
To date, growth numbers have been impressively high.



## II. Policies & Outlook US PV Market

# Overall Market Development USA (2009-2014e)

## Market Development 2009-2014e



## Outlook – Barriers

Following obstacles have to be overcome

- The size of the country leads to difficulties in terms of logistics
- Each state has built its own market place with unique framework conditions
- Distributors and installers act as gatekeepers and intermediaries – no direct access to end customers, lack of installer network
- Installers mainly purchase from distributors and wholesalers and not directly from producers
- So far, installers not really willed to enter in long-term agreements with manufacturers

## Growth Drivers and Barriers in the US

### Growth Drivers



- Growing utility market segment
- Grid parity will be reached in SW
- PV funding schemes
- Economic stimulus program
- Struggle for energy independence
- CO<sub>2</sub> reduction target
- Declining module prices
- Innovative financing schemes

### Growth Barriers



- Insufficient grid infrastructure
- High cost of PV power
- Different levels of experience
- Public awareness is low
- Availability of installers