




Commercial Solar Market Insights

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COLORADO'S NONPROFIT SOLAR LEADER




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The Solar Market At a Glance


- Solar PV: capacity doubled last year in U.S. – and U.S. is only 5% of global market
- Non-residential: about 1/3 PV market in U.S.
- Solar Thermal: Non-residential market grew about 20% last year in U.S.
- Costs: Installed cost of PV decreased 20% last year in the non-residential segment

Source: SEIA, GTM Research



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The Non-Residential Market is Hot:

Businesses, Governments, Nonprofits, Military, Schools, Churches, Etc



The grid contains eight images: 1. A large solar farm with rows of panels. 2. The Google logo with solar panels integrated into the letters. 3. A large government building with solar panels on the roof. 4. A modern commercial building with solar panels. 5. A Costco store with solar panels on the roof. 6. A Costco store with solar panels on the roof. 7. A building with solar panels on the roof. 8. A building with solar panels on the roof and the REI logo in the bottom right corner.



Non-Residential Market: Why the Buzz

- Solar PV costs fell by 50% in past three years
- Predictable energy costs to meet budgets
- Lowers monthly operating costs
- Financing / leasing ramping up
- Customers love it
- Environmental responsibility
- Solar costs continue to fall



What's Driving Down Costs?

- Global Economies of Scale
- Innovation & Technology Advancement
- Increasing Competition
- Public & Private Investment
- National & State Policy
- Efficiencies throughout Supply Chain

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As Solar Manufacturing Ramps Up – Costs Come Down Faster

Logos of solar manufacturers: KYOCERA, First Solar, SCHÜCO, Hanwha Solar One, GE, TrinaSolar, SANYO, Q.CELLS, Rheem, bp solar, VIESSMANN, SUNTECH, SHARP.

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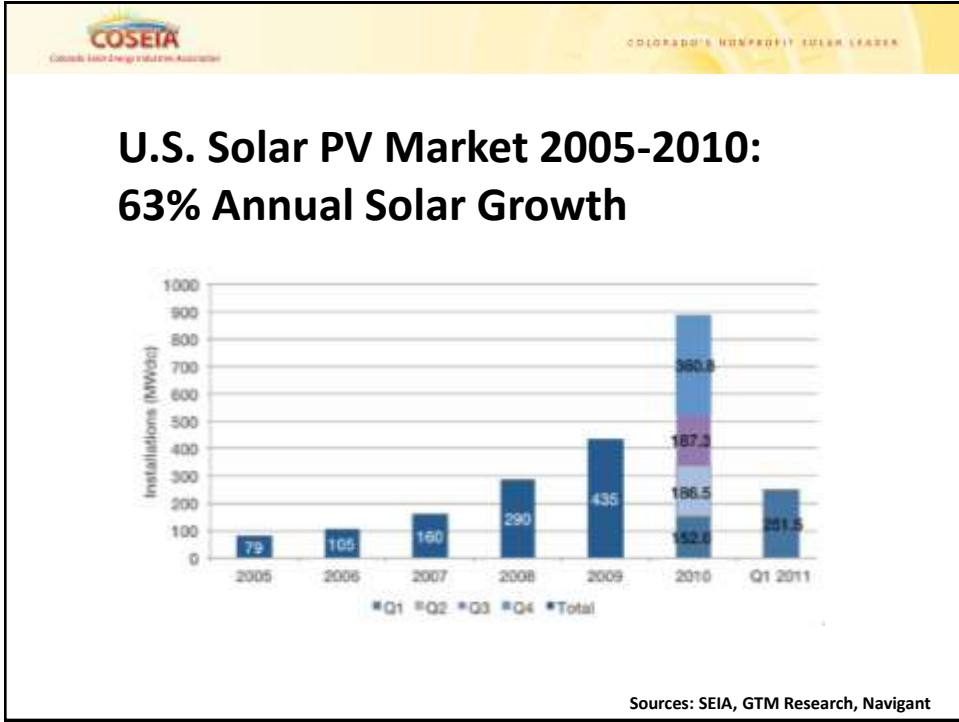
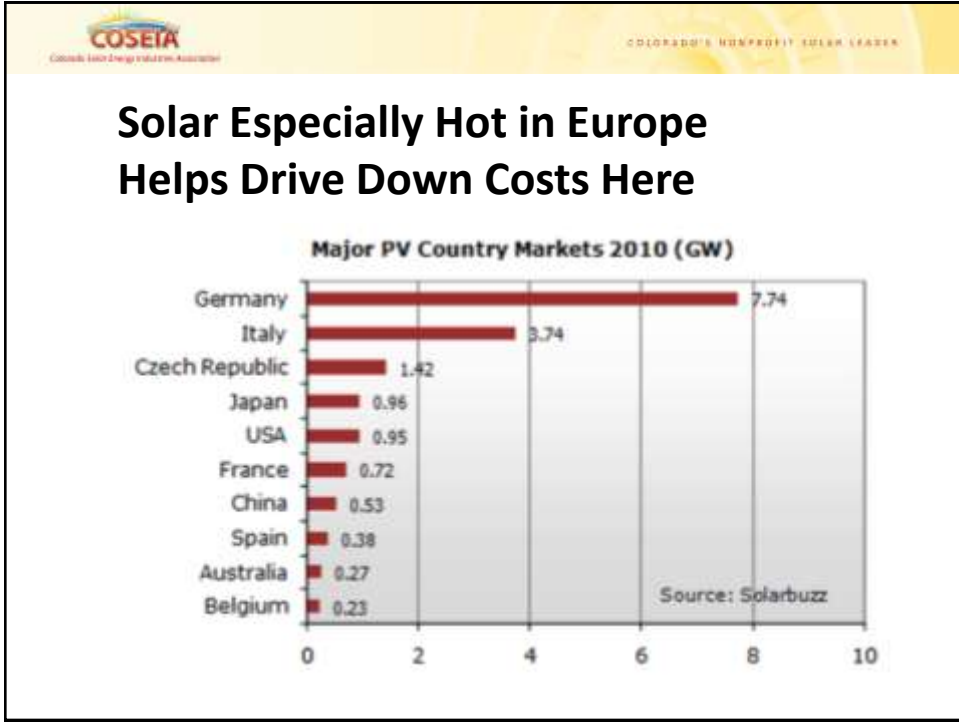
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Global Growth in Solar Lowering Costs for All Solar Customers

Figure 7. Solar PV, Existing World Capacity, 1995–2010

Year	Capacity (Gigawatts)
1996	0.7
1997	0.8
1998	0.9
1999	1.2
2000	1.4
2001	1.8
2002	2.2
2003	2.8
2004	3.9
2005	5.4
2006	7
2007	9.5
2008	16
2009	23
2010	40

Source: PV News & EPIA (2011) & SolarBuzz (2010)



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Top 10 U.S. States in Solar PV

Grid-connected, Cumulative Capacity (2010)

- California 1,022 MW
- New Jersey 260 MW
- **Colorado 121 MW**
- Arizona 110 MW
- Nevada 105 MW
- Florida 73 MW
- New York 56 MW
- Pennsylvania 55 MW
- Hawaii 45 MW
- New Mexico 43 MW

← Colorado is 3th in the U.S.

Source: IREC (June 2011)

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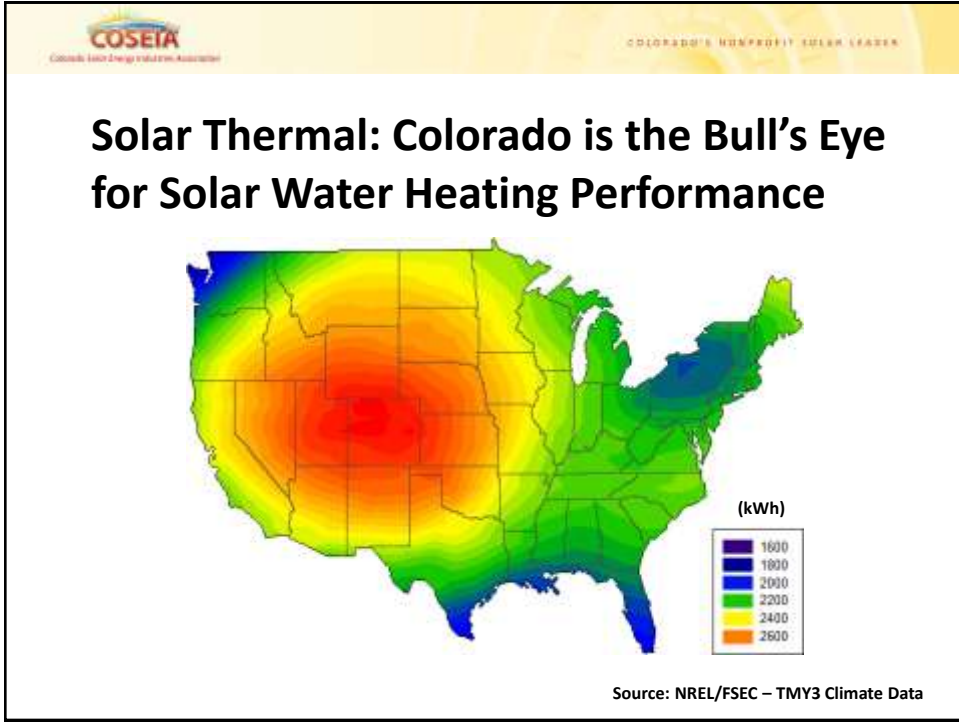
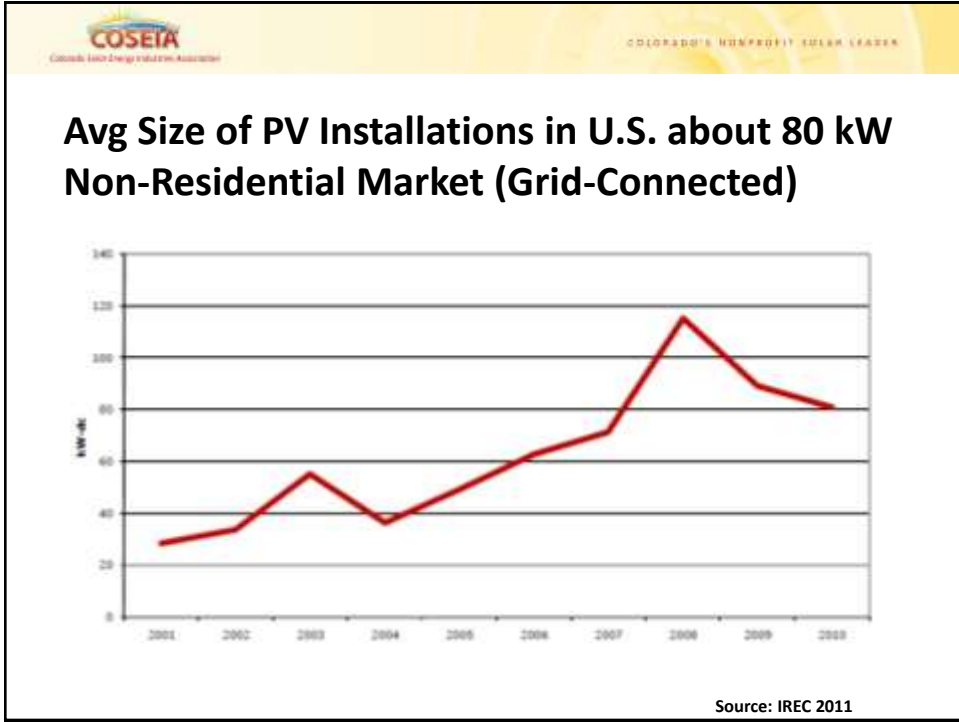
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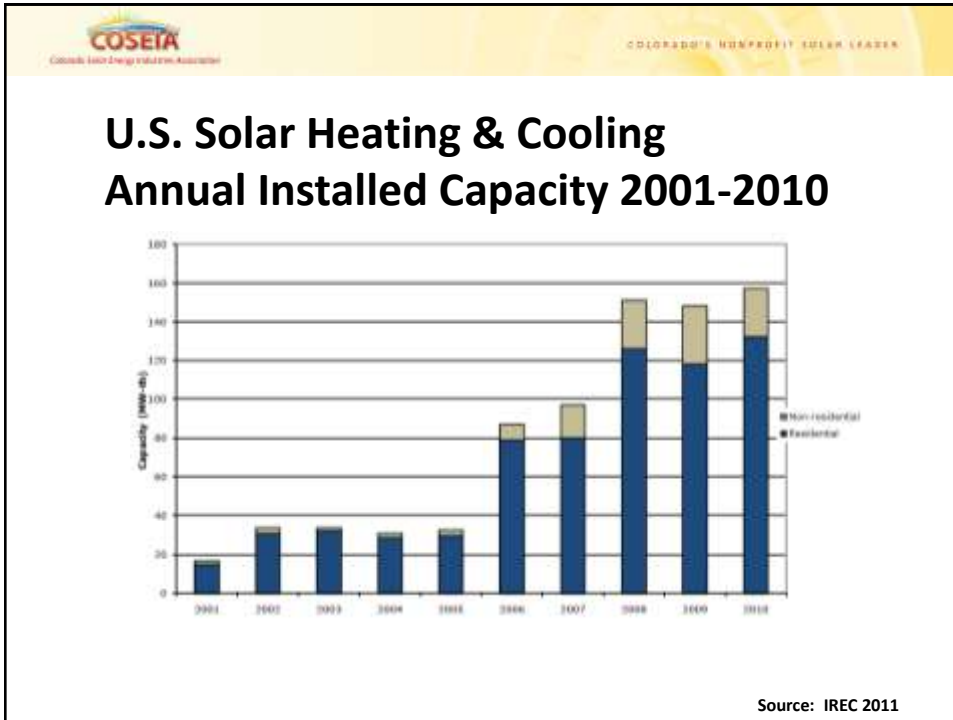
U.S. PV Installations by Segment (Grid-Connected)

Non-Residential Segment Grew By 63% In 2010

Year	Utility	Non-Residential	Residential	Total
2001	10	0	0	10
2002	15	0	0	15
2003	20	5	0	25
2004	25	10	0	35
2005	30	15	0	45
2006	35	20	0	55
2007	40	25	0	65
2008	45	30	5	80
2009	50	35	10	95
2010	55	40	26	121

Source: IREC June 2011






Solar Is A Major Job Creator In Colorado

Top 10 States for Solar Jobs:

1.	California	36,000 Jobs
2.	Pennsylvania	6,700 Jobs
3.	Texas	6,400 Jobs
4.	Michigan	6,300 Jobs
5.	Wisconsin	6,000 Jobs
6.	Colorado	5,300 Jobs
7.	Georgia	4,500 Jobs
8.	Arizona	3,800 Jobs
9.	New York	3,500 Jobs
10.	Indiana	3,400 Jobs

Colorado is the #2 State for Solar Jobs Per Capita

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Opportunities


- Avg non-residential system more than 10x size of residential system
- Solar costs falling; fossil fuel costs rising
- Wide range of customer types
- Growth in PV and thermal
- 30% federal investment tax credit (thru 2016)
- State, local & utility incentives available in some regions

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Challenges:

- Solar incentive instability
- Treasury grant program
Funded 40% of non-residential market in 2010
- Availability of financing






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For More Information

- Colorado Solar Energy industries Association
www.coseia.org
- Solar Finance Colorado – October 11
- Solar Power Colorado – largest business-to-business solar conference & expo in state – February 8-10



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Any Questions?

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