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Protecting the Midwest's Environment and Natural Heritage

Midwest Solar Policy Landscape

Brad Klein – Environmental Law & Policy Center

Solar Powering Your Community Conference

Madison, WI

October 11, 2012

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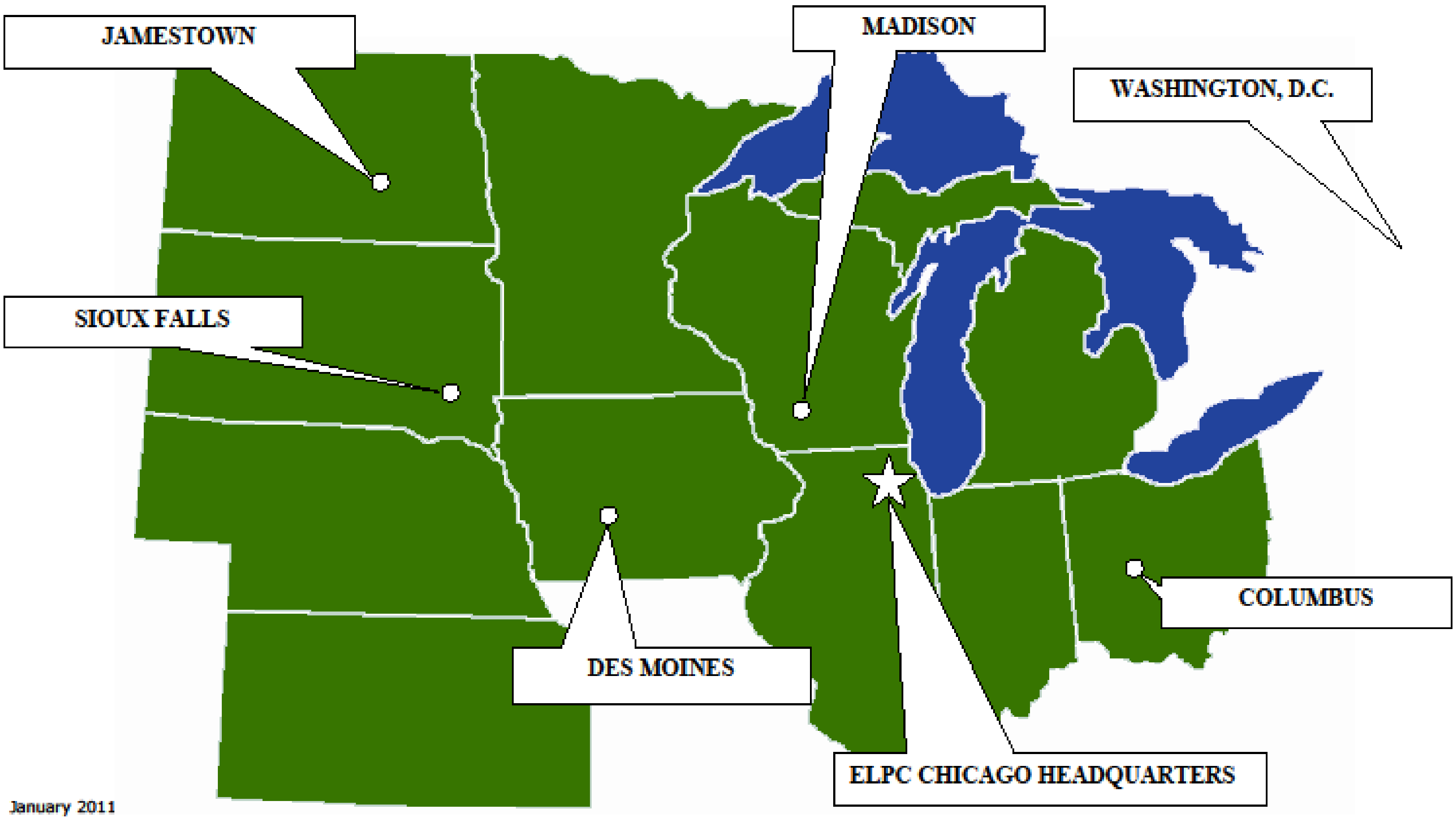
Protecting the Midwest's Environment & Natural Heritage



January 2011

The Solar Market is Booming

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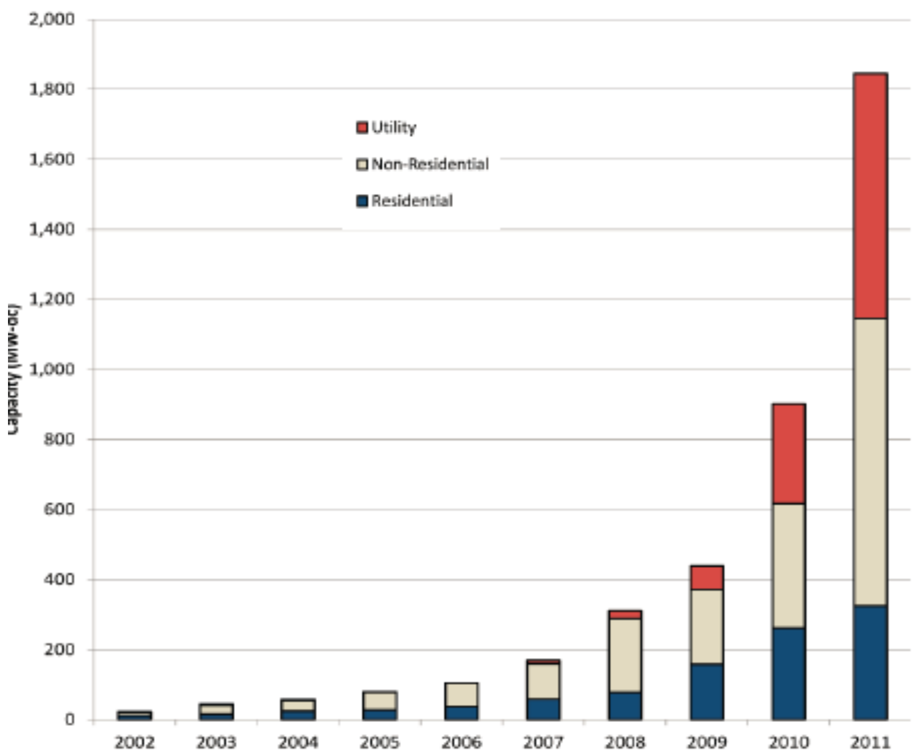
- New U.S. installed PV capacity doubled in 2011

- Annual installed capacity has grown by 10X over just 4 years.

(1,845 MW in 2011)

Figure 2: Annual Installed Grid-Connected PV Capacity by Sector (2002-2011)



Source: IREC, Solar Market Trends 2012

Jobs and Economic Development

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- Development is concentrated in states and cities that have supportive policies.

Subsector	2010 Jobs	2011 Jobs	2012 Jobs	2011-2012 Expected Growth	2011-2012 Expected Growth Rate
Installation	43,934	52,503	65,571	13,068	22%
Manufacturing	24,916	24,064	27,537	3,473	14%
Sales and Distribution	11,744	17,722	23,910	6,188	35%
Other	12,908	5,948	6,933	985	17%
Total	93,502	100,237	123,951	23,714	24%

Solar Foundation, National Solar Jobs Census 2011

Figure 1-2: 2010-2011 PV Installations by State

RANK ('10)	RANK ('11)	STATE	2010 (MW)	2011 (MW)
1	1	California	259	542
2	2	New Jersey	132	313
3	3	Arizona	63	273
7	4	New Mexico	43	116
5	5	Colorado	54	91
6	6	Pennsylvania	47	88
11	7	New York	23	60
9	8	North Carolina	31	55
10	9	Texas	23	47
4	10	Nevada	61	44

SEIA, Solar Market Insight, 2011 Year-In-Review

State Policy Matters

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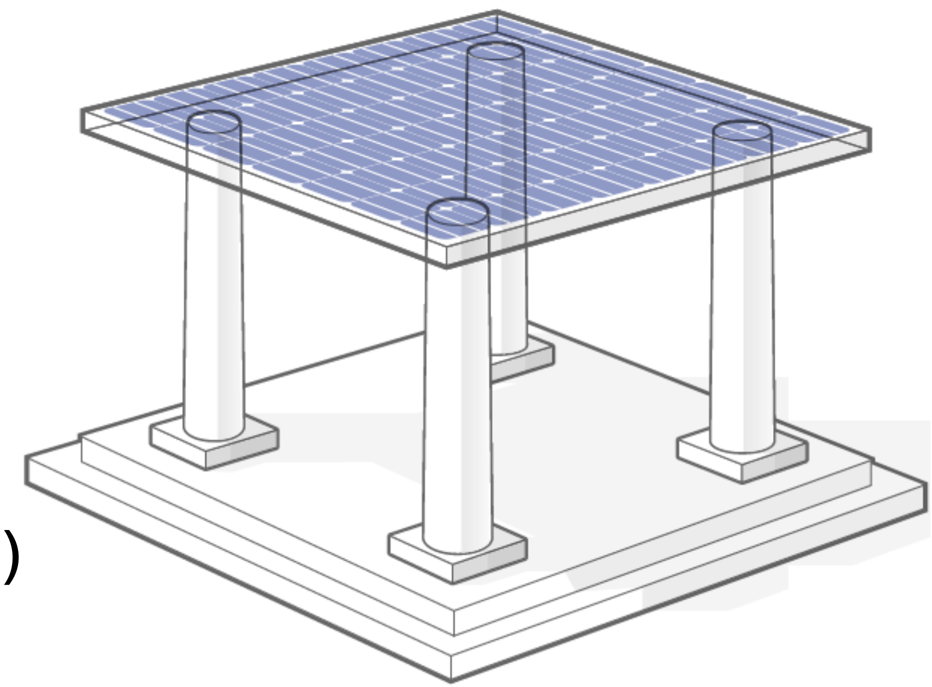
- RPS with Solar Carve-Out
- Net Metering
- Interconnection Standards
- Grants and incentives
- Rate Design
- Zoning / Permitting
- PPAs ("Clean Energy Choice")



Source: IREC,

Source: IREC, Solar Market Trends 2012

Snapshot of solar policies across the nation

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- 16 states plus D.C. have an **RPS with solar/DG provisions**
- More than 40 states have established **net metering policies.** 19 allow net metering for certain systems 1 MW and higher.
- More than 30 states have established comprehensive **interconnection standards.**
- At least 22 states allow 3rd-party solar PV purchase power agreements (aka **Clean Energy Choice**)
- Many other important policies: direct incentives, tax incentives/credits, loan programs, permitting, financing (PACE), solar access laws, etc…

Source: DSIRE SOLAR, 2012

Snapshot of Existing Solar Policy in the Midwest

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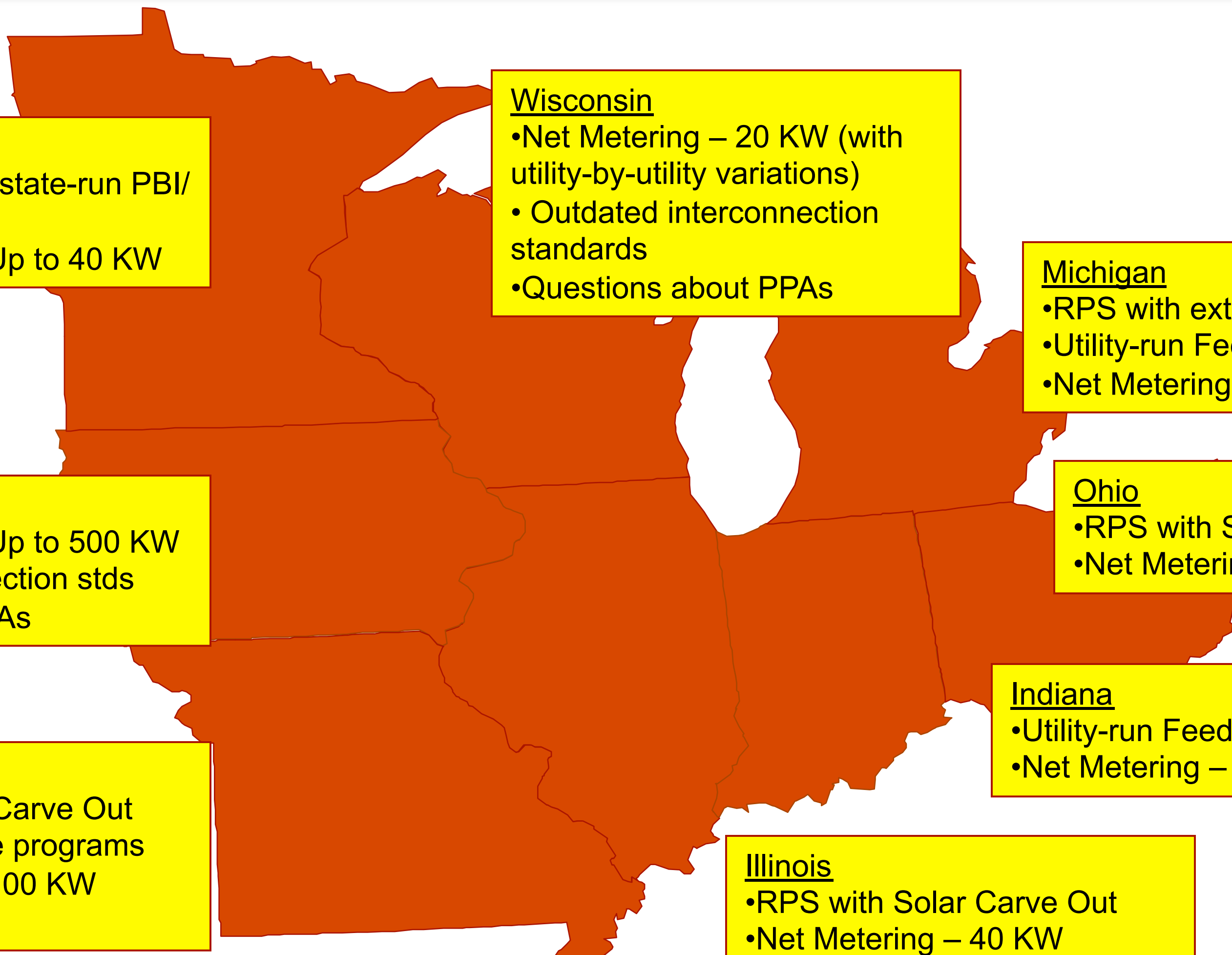

Minnesota
- Small utility and state-run PBI/ rebate programs
- Net Metering – Up to 40 KW

Wisconsin
- Net Metering – 20 KW (with utility-by-utility variations)
- Outdated interconnection standards
- Questions about PPAs

Michigan
- RPS with extra credit for solar
- Utility-run Feed-In Tariff Pilots
- Net Metering – Up to 150 KW

Iowa
- Net Metering – Up to 500 KW
- Good interconnection stds
- Dispute over PPAs

Ohio
- RPS with Solar Carve Out
- Net Metering – Sized to load

Indiana
- Utility-run Feed-In Tariffs
- Net Metering – Up to 1 MW

Missouri
- RPS with Solar Carve Out
- Utility PBI/rebate programs
- Net Metering – 100 KW (monthly true-up)

Illinois
- RPS with Solar Carve Out
- Net Metering – 40 KW
- Good interconnection stds

Snapshot of Existing Solar Policy in the Midwest

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- **Solar Carve Outs will drive Midwestern solar markets:**
  - Illinois: about 650 MW by 2015
  - Ohio: 230 MW by 2015, 825 MW by 2025
  - Missouri: 150 MW by 2021
- **Interconnection standards** are on the books in all Midwestern states. Best practice rules in Illinois and Iowa.
- **Net metering** rules are also on the books, but there is significant room for improvement. Indiana's new 1 MW rule is a good model.
- **Feed-In Tariffs**: Small, utility-run programs operating in Michigan and Indiana. Interest in expanding and improving these programs is strong.
- **3rd Party PPAs ("Clean Energy Choice")** are increasingly being discussed. Current litigation in Iowa and legislative campaign in WI.

Current Developments to Watch

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- **Illinois** will not meet its RPS/solar goals unless legislation is passed to fix the RPS budget. Municipal aggregation of retail load could provide opportunities for local solar development.
- In **Indiana,** the future of utility feed-in tariffs is uncertain. Advocates are hopeful about the potential of new IRP rules.
- In **Iowa**, the legality of PPAs is in question. Unclear whether Iowa will embrace solar like it has wind.
- In **Michigan**, the 25x25 ballot initiative is biggest priority. Advocates are working to expand utility feed-in-tariffs beyond "pilot" phase.
- **Missouri** advocates are working to improve net metering rules.
- **Ohio's** 50 MW Turning Point project would be largest in the Midwest. Unclear if there is a role for small residential programs in Ohio.
- **Wisconsin** is grappling with net metering and "clean energy choice."
- **Nationally**, we're seeing increasing tension about net metering and some interest in "value-based" solar tariffs. States with high PV penetration are revisiting interconnection standards.

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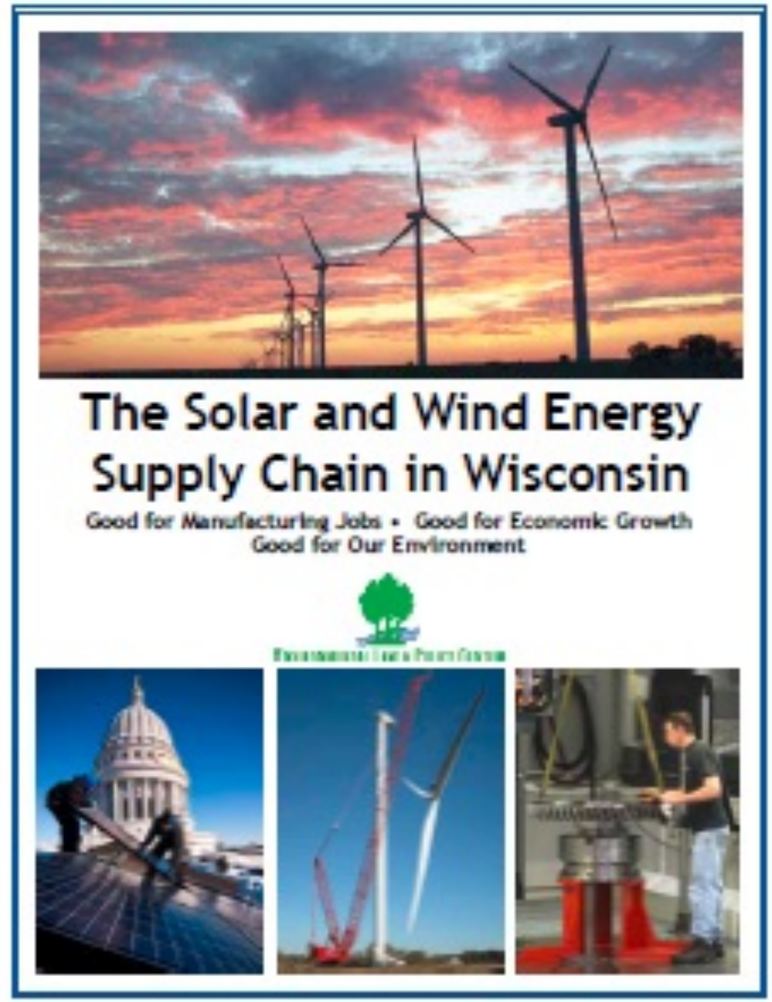
There is much at stake …

- Wisconsin is home to more than 250 wind and solar supply chain businesses that are tied to more than 12,000 Wisconsin jobs.
- Over 300 Illinois companies are working in the wind, solar or geothermal energy industries and employing over 18,000 people in the state.
- Solar and wind power provide over 10,000 jobs in Michigan.



Source: ELPC wind and solar supply chain reports. (http://elpc.org/2011/07/31/supplychainreports)

Thank you!

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