

Utah Net Metering



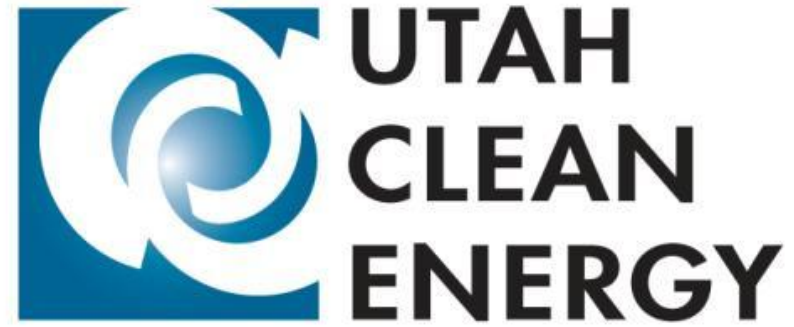
**Public Utilities & Technology Interim
Committee
June 23, 2010**



**Sara Baldwin
Senior Policy &
Regulatory Associate**



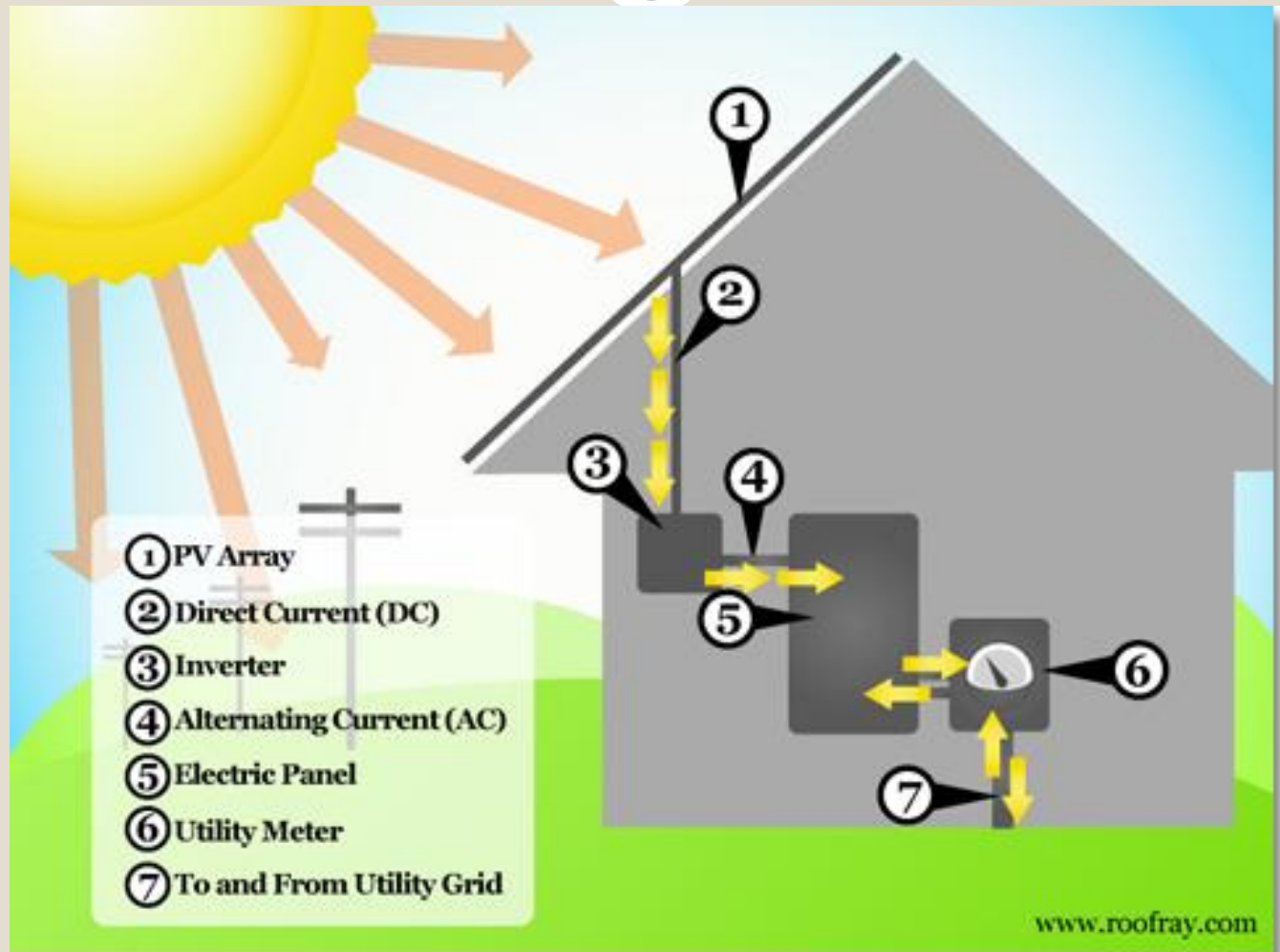
We Partner to Build the New
CLEAN ENERGY ECONOMY



www.utahcleanenergy.org

- Non-Profit, Non-Partisan 501(c)3 Organization
- Partnering to build the new clean energy economy through advancement of energy efficiency and renewable energy
- Diverse partnerships and projects
- Collaborative, solutions-oriented approach
- Est. 2001 with 1.5 staff, now a staff of 9
- 6-member Board of Directors

Net Metering: How it Works





Utah's Net Metering History



- State Policy first adopted in 2002 (HB 7 – Net Metering of Electricity, Rep. Snow & Sen. Jenkins)
- State Policy updated and revised in 2008 (SB 84 – Net Metering Provisions, Sen. Van Tassell & Rep. Barrus)
- Key Stakeholders at table in 2008: Rocky Mountain Power, Rural Electric Cooperatives, Salt Lake County, Office of Consumer Services, Utah Clean Energy, Governor's Energy Advisor, State Energy Program, Division of Public Utilities, and the general public
- Provisions defer technical decisions to the appropriate Governing Authority
- Utah's 2008 Net Metering policy supports customer choice, spurs private investment in new energy technologies, and helps create jobs





Utah's Current Net Metering Policy Includes a Smart Safety Net



54-15-105. No additional fee or charge without governing authority approval -- Exception.

(1) An electrical corporation administering a net metering program may not charge a customer participating in the program an additional standby, capacity, interconnection, or other fee or charge unless the governing authority, after appropriate notice and opportunity for public comment:

(a) determines that:

(i) the electrical corporation will incur direct costs from the interconnection or from administering the net metering program that exceed benefits, as determined by the governing authority, resulting from the program; and

(ii) public policy is best served by imposing a reasonable fee or charge on the customer participating in the net metering program rather than by allocating the fee or charge among the electrical corporation's entire customer base;

54-15-102 (8) "Governing authority" means:

(a) for a distribution electrical cooperative, its board of directors; and

(b) for each other electrical corporation, the Public Service Commission.



Net Metering Docket Support



- Over 40 businesses, local governments, and interested parties submit comments or testimony before the Public Service Commission
- **“Rocky Mountain Power would support moving from the avoided costs to valuing the excess generation in kilowatt hours...RMP believes the current process of valuing excess generation at avoided costs, calculating dollars credits on monthly bills, and explaining the avoided cost methodology and calculations to customers, is burdensome to administer and confusing for all involved.”**
 - *Rocky Mountain Power Response to Comments of Parties, Schedule 135, Net Metering Service, Re: Advice No. 08-035-78, Jeffrey K. Larsen, Vice President, Regulation, December 9, 2008*
- **“Utah Association of Energy Users (UAE) is very supportive of a high cap, such as 20 percent, with a provision the Company notify the Commission in the event engineering constraints develop which would prohibit such development. UAE believes it is prudent to err on establishing the cap as high as possible so as to enable the market and customers to develop these systems. Wal-Mart concurs with UAE’s comments on this issue.”**

- *Commission Order, page 13.*



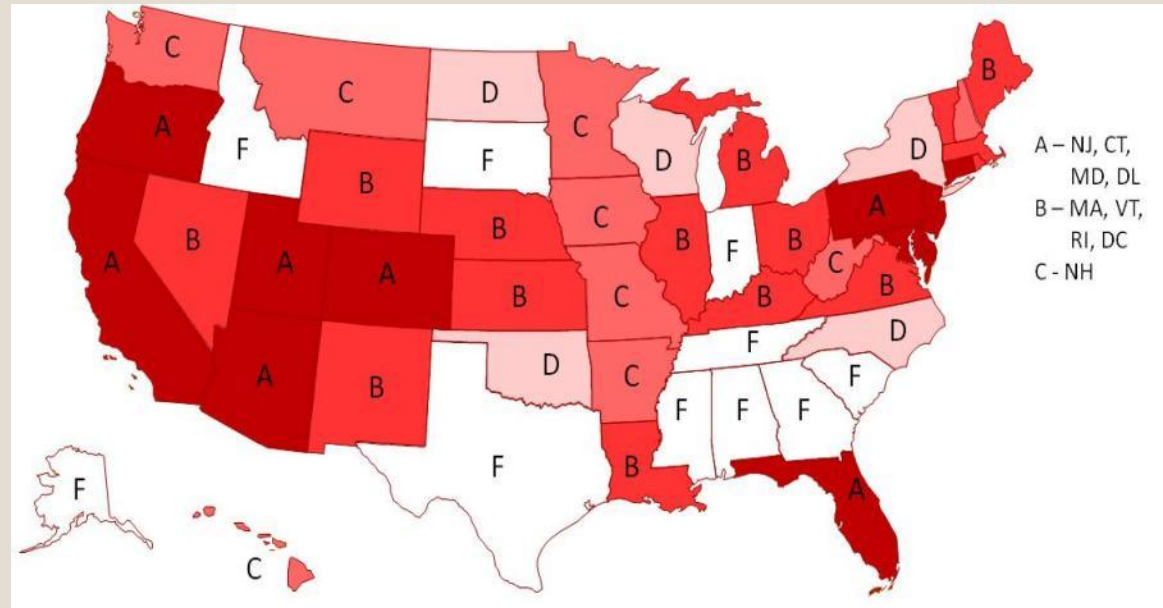
Utah's Net Metering gets an 'A'



2007



2009



Grading from NNEC's *Freeing the Grid 2009* report at www.freeingthegrid.org; map used with permission from Jason Keyes of Keyes & Fox



2009 Net Metering Annual Report



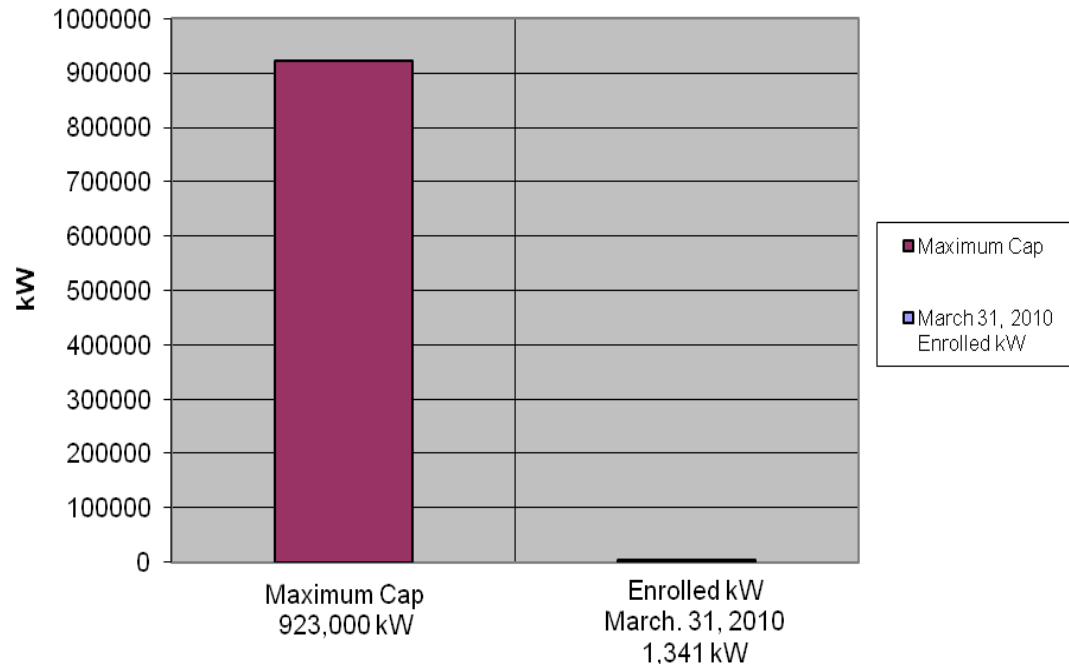
“Rocky Mountain Power is not aware of any unforeseen problems or barriers in the net metering tariff.” - 2009 Annual Report (issued March 31, 2010)

Customer Class	# of customers
COMMERCIAL	53
INDUSTRIAL	2
IRRIGATION	1
RESIDENTIAL	481
Grand Total	537

Expired Credits at End of Annualized Period

Customers	KWH's
61	12,828

**Net Metering Activity to Cap
As of March 31, 2010**





Utah's Energy Demand is Growing



- Utah's population is growing rapidly (5th in the nation)
- PacifiCorp's 2008 Integrated Resource Plan Update projects a system-wide *shortfall* of 1200 MW by 2012
- Private investment in distributed, net-metered energy sources can help Utah meet some of our growing demand



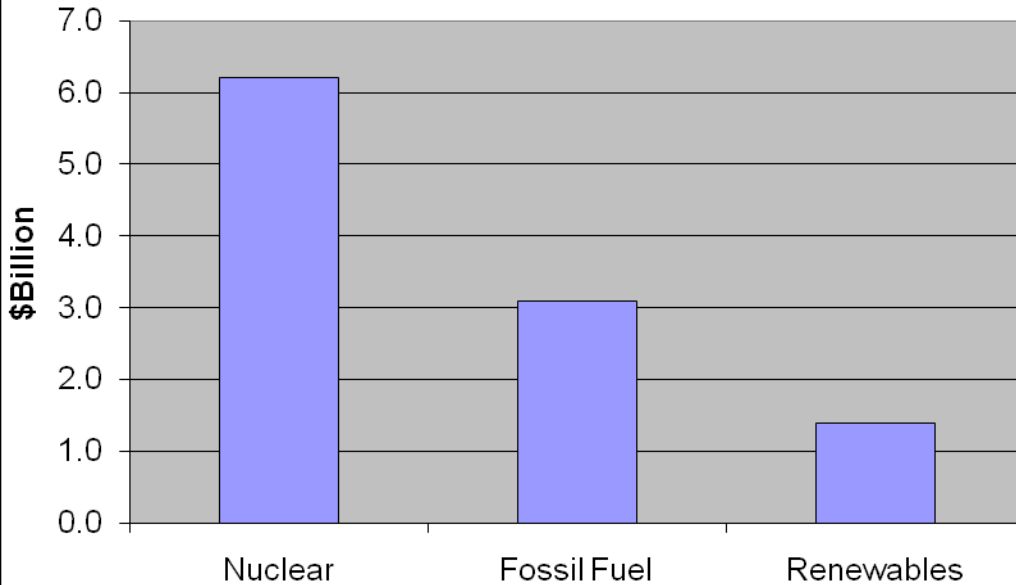


Energy is a Highly Regulated Market



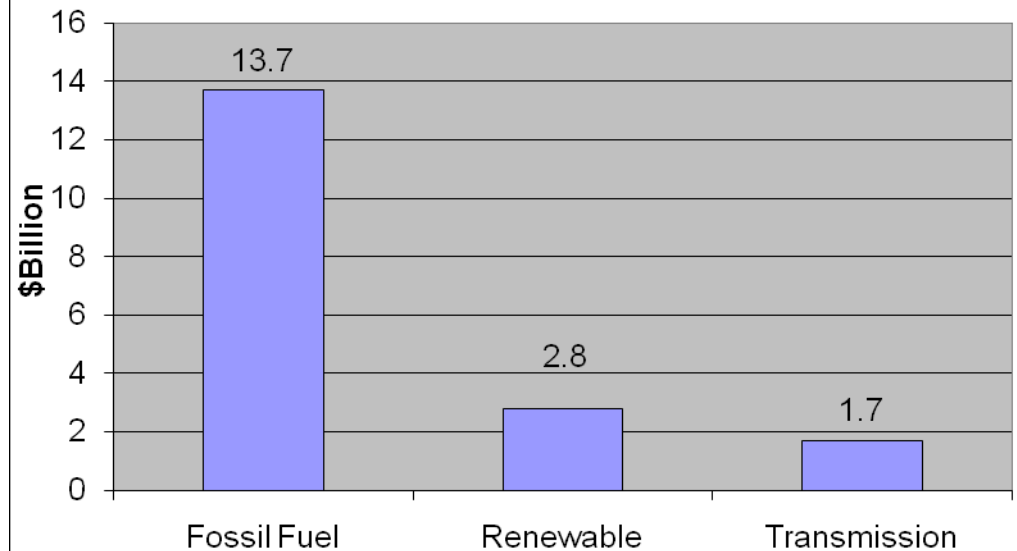
- Rocky Mountain Power is a state-regulated monopoly serving ~ 80% of Utah's electricity needs (approximately 800,000 customers in Utah)
- 42 Municipal Utilities and 10 Rural Electric Cooperatives serve the remaining 20%
- Difficult to apply free market principles to a highly regulated, subsidized energy market with granted monopolies
- Inter-customer subsidies and subsidies to all energy resources currently exist for a variety of reasons
- Policies and rules help spur competition, innovation, and market transformation, while removing barriers
- Emerging energy technologies seek a level playing field on which to compete

Federal Electricity Subsidies 2002-2007 Research and Development



Energy Subsidies & Support

Federal Electricity Subsidies 2002 - 2007 Tax Expenditures



“Some electricity sources, such as nuclear, coal, oil, and natural gas, have received varying levels of subsidies and support in the past which may have aided them in reaching their current role in electricity production.”

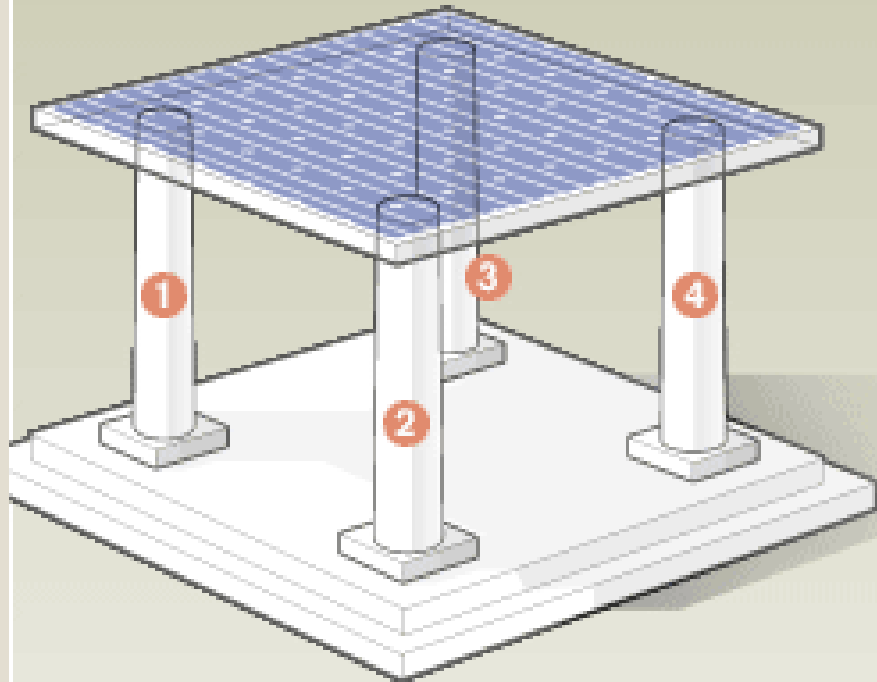
– Energy Information Association, Federal Financial Interventions and Subsidies in Energy Markets 2007, Executive Summary, xvi



Net Metering is an Important Pillar



The Four Pillars of Cost-Effective Solar Policy



Solar Policy and Regulation

- 1 Incentives
- 2 **Net metering standards**
- 3 **Interconnection standards**
- 4 Rates and revenue policies



Summary



- Utah's recently updated net metering policy is working to remove market barriers and create new energy and economic development opportunities for the state of Utah.
- Utah's net metering policy is a well-thought out and well-balanced policy developed with broad stakeholder input that provides protections to both consumers and the utility.
- The legislation smartly provides the Public Service Commission with the authority to address any disparity between costs and benefits, should they arise.

Thank You!

Questions?

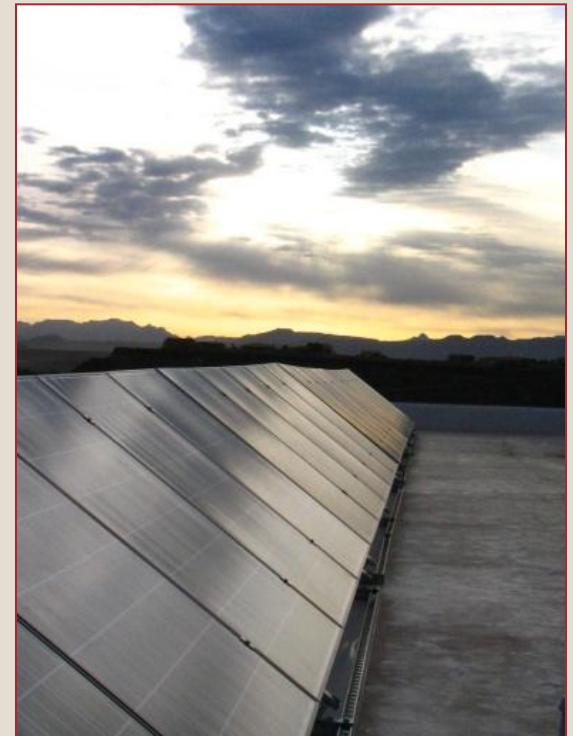


Sara Baldwin
Senior Policy & Regulatory
Associate

sbaldwin@utahcleanenergy.org

www.utahcleanenergy.org

801-363-4046



Supplemental Slides



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Mission and Board of Directors



Mission:

Utah Clean Energy partners to build the new clean energy economy
www.utahcleanenergy.org

Board of Directors

- **Libby Ellis**, Development Director, Rowland Hall St. Marks School
- **Howard Gellar**, Executive Director , SWEEP
- **Lohra Miller**, Salt Lake County District Attorney
- **Bob O'Connor**, Partner, Wilson Sonsini Goodrich & Rosati
- **Doug Willmore**, CAO, Salt Lake County
- **Alan Westenskow**, Vice President, Zions Bank Public Finance



Basic Electricity Terms and Stats



- **Watt (W)**: Unit of power that measures the rate of flow of energy (like horsepower used to measure engines)
- **Kilowatt (kW)**: 1 kW = 1,000 W; **Megawatt (MW)**: 1 MW = 1,000 kW
- **Kilowatt-hour (kWh)**: A kilowatt-hour is a unit of energy necessary to provide 1 kW of power for 1 hour. 1 kWh can light a 100-W light bulb for 10 hours.
- **Average Utah household** uses approximately 800 kWh of electricity per month, or 9,600 kWh per year
- **A 1 kW solar photovoltaic PV** system can provide approximately 1,400 to 1,600 kWh of electricity per year in Utah, depending on location and configuration
- **An average Utah home** would likely need a 6 – 7 kW system to meet 100% of their annual electricity usage
- **Typical residential solar PV** system size in Utah is 1.5 – 3 kW (or 20 – 45% of annual usage, assuming average usage – varies according to usage patterns, home size, and level of efficiency)



Net Metering Docket Rulemaking Order



- Docket 08-035-078, Public Service Commission Order issued February 12, 2009
- Total System Capacity set at 20% of RMP's 2007 peak demand (approx 900 MW)
- Residential customers receive kilowatt-hour credits for any excess generation they produce.
- Large commercial and industrial customers with demand charges that generate excess generation given a choice between valuing excess generation at an avoided cost based rate or valuing excess generation at an alternative rate based on FERC Form No. 1.
- www.psc.state.ut.us/utilities/electric/elecindx/documents/0803578ROdtm.pdf

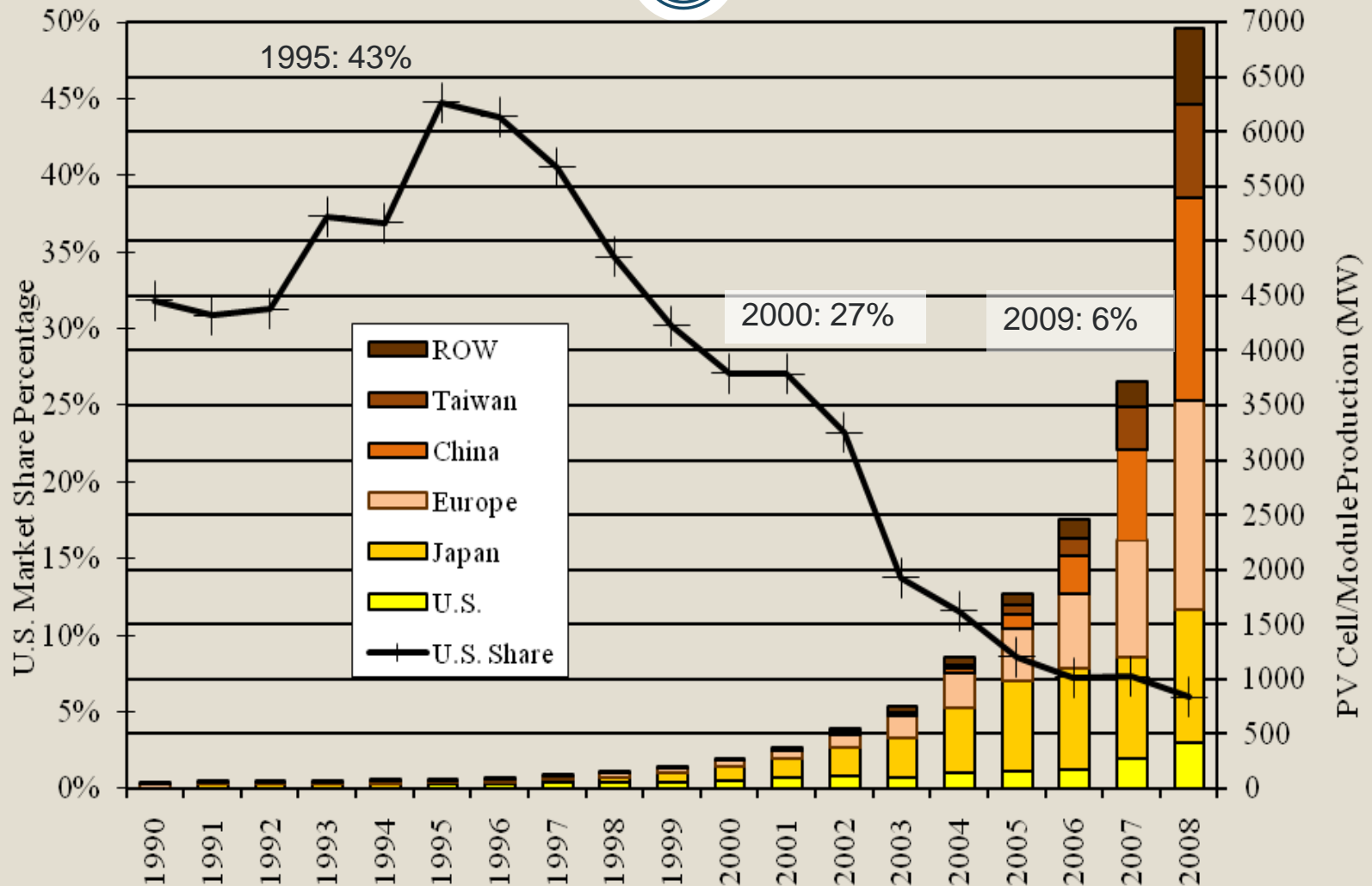


Current Inter-Customer Subsidies

		Rate of Return Index A Rate of Return Index of 1 = customer class is generating revenues that match their cost of service, < 1 indicates an inter-customer subsidy (shown in red)						
Sched. No.	Description	2003	2004	2006	2007	2008	RMP 2009 Rate Case Direct Testimony	RMP 2009 Rate Case Rebuttal Testimony
1	Residential	1.11	1.17	1	1.05	1.23	1.16	1
6	Gen. Service - Large	0.99	0.94	1.31	1.2	0.9	1.03	1.11
8	General Service - Over 1 MW	NA	0.99	1	1.01	0.97	0.94	1.02
9	General Service - High Voltage	0.86	0.98	0.62	0.77	0.68	0.69	0.78
10	Irrigation	0.33	0.48	0.29	0.12	0.32	0.43	0.43
23	General Service - Small	1.28	1.09	1.18	0.84	1.15	1.01	1.13
SpC	Customer A (Special Contract)	NA	NA	NA	NA	NA	.23	0.34
SpC	Customer B	NA	NA	NA	NA	NA	-0.50	-0.24
SpC	Customer C	NA	NA	NA	NA	NA	0.52	1.21

Rate of returns for individual classes for the last six Rocky Mountain Power rate cases, beginning with Docket 03-2035-02 and continuing through the most recent rate case, Docket 09-035-23. The individual class returns are taken directly from Rocky Mountain Power's Summary Cost of Service Exhibit in each case, which show Cost of Service results by rate schedule. 19

U.S. no longer global leader in solar manufacturing

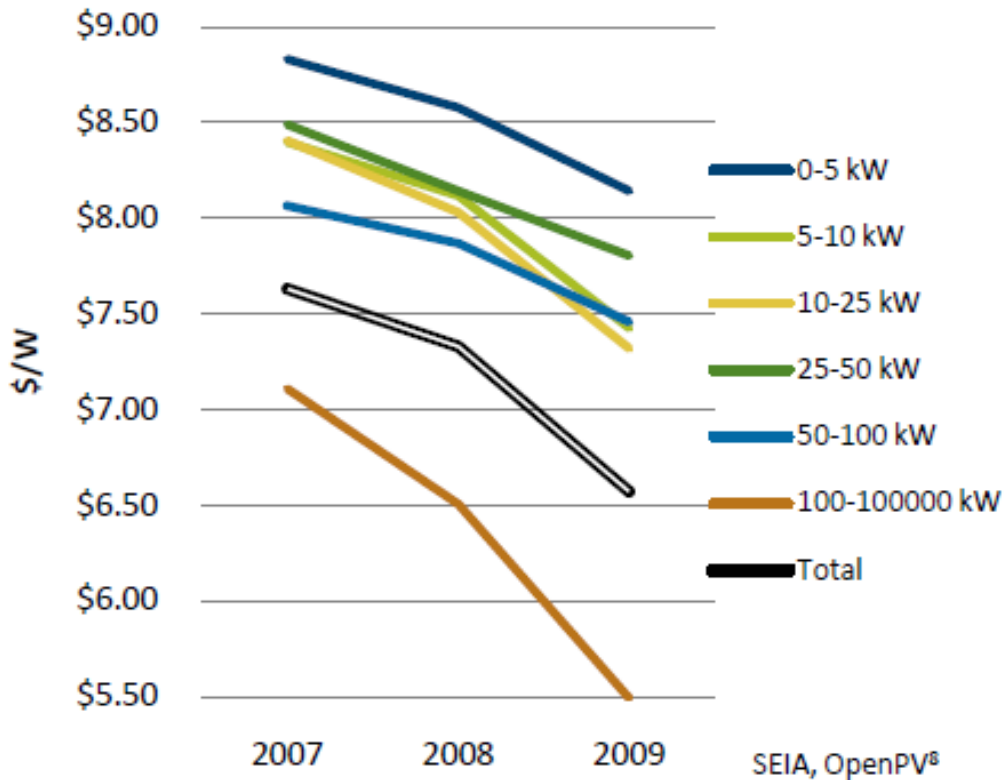




Solar is becoming more cost-effective... but barriers remain

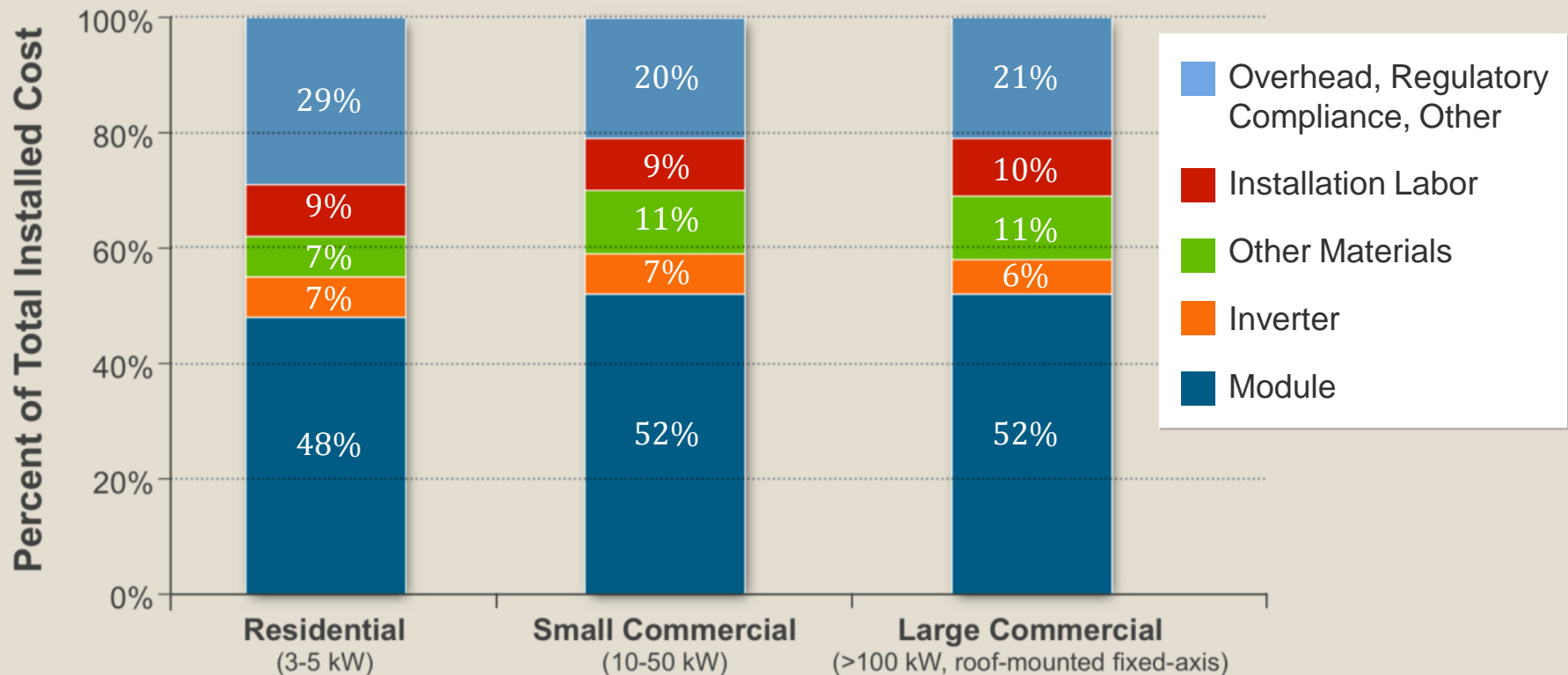


Average PV Installed Cost



A Closer Look at Solar PV Costs

Labor, permitting, interconnection, and other regulatory costs are a significant fraction of the total cost of a PV system

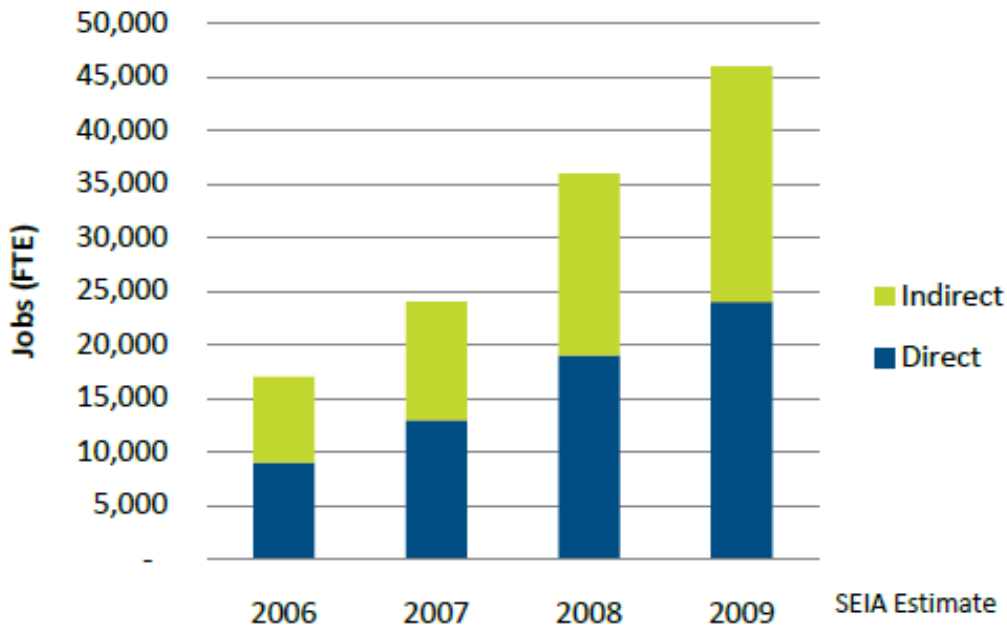




Utah stands to gain solar jobs and new economic opportunities...with strong policies and leadership



Estimated U.S. Solar Industry Employment



- **38 + solar companies and 130 + employees working in the solar industry in Utah (2010)**

- **Futura Industries in Ogden assembles solar frames:**
"Every day, 2,000 solar panel frames come out of here," she said. "I thank our lucky stars that we got into that four or five years ago. We cast nets wide across markets, every one we can. **That has protected us in this downturn.**"

- Futura Industries
President Susan Johnson (Salt Lake Tribune *At Futura in Utah, thriving is the bottom line* Mike Gorrell)

Utah: Center of National Solar Instructor Training Network

Supporting the training for up to 1400 instructors, resulting in a projected capacity to train up to 170,000 students, nationwide

California Community Colleges Board of Governors, California Energy Commission, California Centers for Sustainable Energy, the Labor Management Cooperation Committee

Salt Lake Community College; Solar Energy International; Utah Solar Energy Association

Midwest Renewable Energy Association

Hudson Valley Community College

Kennebec Valley Community College

Pennsylvania State University

North Carolina Solar Center at NCSU

Activities:

- Sponsor instructors at “train the trainer” workshops and equip labs
- Create and modify curricula and align them to highest standards
- Create replicable training models for local instructors
- Use innovative approaches such as online tools and mobile labs
- Leverage resources and share best practices

The Energy Institute at HCC - Northeast

Florida Solar Energy Center at UCF

REGIONS:

- Northeast
- Northern Mid-Atlantic
- Southern Mid-Atlantic
- Southeast
- Midwest
- South-Central
- Rocky Mountain
- California/Hawaii

- Providers
- ★ Partnership