



Washington Update - American Recovery and Reinvestment Act

Key Provisions Benefiting the Solar Energy Industry

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President and CEO

Expanded Federal Tax Credits

Emergency Economic Stabilization Act of 2008

- 30% Commercial ITC extended through 2016
 - Allow utilities to utilize tax credit
 - AMT relief
- 30% Residential ITC extended through 2016
 - Remove \$2,000 cap on residential
 - Alternative Minimum Tax (AMT) relief

Changes in Washington

- **New Administration**

- Carol Browner
- Dr. Stephen Chu

- **Congress**

- Waxman replaces Dingell Chairman of House Committee on Energy & Commerce
- Markey Subcommittee on Global Warming
- Senate – Democrat Majority Increases

American Recovery and Reinvestment Act

- **Signed into law Tuesday, February 17, 2009**
- **Only 28 days into Administration**
- **19 separate provisions that benefit solar**
- **Renewable energy a priority for the Administration**
- **Signed at the Colorado Science Museum**
 - 100 kW solar system tour
 - Introduced by Blake Jones – Namaste Solar

1. Federal Guidance Pending

- Agency guidance in the next 60 to 90 days

Renewable Energy Grants

- **New Program through Treasury that monetizes the tax credits**
- **Applicants receive 30% rebate on system costs when placed in service**
- **Projects must begin by 12/31/2010 and be complete by 1/1/2017**
- **Benefit**
 - Allows the ITC to be used by companies without sufficient tax appetite
 - Support 120 MW in 2009, 320 MW in 2010

Renewable Energy Loan Guarantee Program

- **Expands existing EAct title XVII Program**
 - Establishes a temporary loan guarantee program at DOE for renewable energy projects, manufacturing facilities, transmission
- **Appropriates \$6 billion for credit subsidy cost**
- **Streamline application and approval process**
 - Operational by April/May
- **Benefits**
 - Lower cost financing – 3% through Treasury Bank
 - Provides \$60 billion in loan guarantees
 - Support 30 MW in 2009, 80 MW in 2010
 - Sleeper program

Renewable Energy Manufacturing Investment Credit

- Provides up to \$2.3 billion to fund 30 percent investment tax credit for manufacturing assets used to manufacture of advanced energy property.

SAI High Scenario										
	Annual Installations (MW) ¹	New Manufacturing Capacity (MW)	Cost/Watt of New Manufacturing Plants ²	Direct Manufacturing Job Intensity (Jobs / MW) ³	Direct Jobs ⁴	Indirect Jobs ⁵	Induced Jobs ⁶	Total Jobs	Annual PV Cost to Treasury (million \$) ⁷	Cumulative PV Cost to Treasury (million \$)
2009	423	121	\$2.05	10.6	3,592	5,029	7,543	16,164	\$81	\$81
2010	592	169	\$1.91	10.3	4,851	6,792	10,187	21,830	\$117	\$198
2011	799	207	\$1.74	9.9	6,309	8,833	13,250	28,393	\$135	\$332
2012	1,078	280	\$1.56	9.5	8,194	11,472	17,208	36,875	\$156	\$488
2013	1,456	377	\$1.39	9.1	10,626	14,876	22,314	47,816	\$179	\$667
2014	1,965	509	\$1.23	8.8	13,755	19,257	28,886	61,898	\$202	\$869
2015	2,653	688	\$1.07	8.4	17,774	24,883	37,325	79,981	\$221	\$1,090
2016	3,341	688	\$1.07	8.0	21,379	29,931	44,897	96,208	\$216	\$1,306
Total	12,305	3,039								\$1,429 ⁸

Source: NREL Analysis

Smart Grid

- **The legislation provides up to 50% reimbursement to smart grid demonstration projects**
- **This has the potential to increase the use of time-of-use pricing, enabling PV system owners to realize energy savings faster.**

2. Tax code provisions effective upon enactment

- Effective upon enactment unless noted otherwise

Repeals Penalty for Subsidized Renewable Energy Financing

- **Allows businesses and individuals to qualify for the full amount of the solar tax credit, even if projects receive subsidized energy financing (e.g. below market loans, tax preferred bonds, state grants etc.).**
- **Increases value of ITC by 30-50%**
- **Expands opportunities for new financing models – e.g., Berkeley First.**
 - Helps avoid large upfront costs
 - Enables consumers to transfer systems (with sale of home) to new owners

Removes Limits on Solar Water Heating

- **Removes the \$2,000 monetary cap on the residential solar water heating investment tax credit**
- **Expands market by making solar radiant heating more attractive**
- **Benefit**
 - 2 million square feet of collector installations in 2009
 - 9,700 jobs (direct, indirect and induced)

Extends Bonus Depreciation

- **Extends temporary increases for capital expenditures incurred in 2009. Accordingly, until the end of 2010, business taxpayers are allowed to write-off up to \$125,000 (indexed for inflation) of capital expenditures subject to a phase-out once capital expenditures exceed \$500,000 (indexed for inflation).**

5-Year Carryback of Net Operating Losses

- For tax years 2008 and 2009, extends the maximum carryback period for net operating losses from two years to five years.
- An eligible small business is a taxpayer meeting a \$15,000,000 gross receipts test.
- An applicable NOL is the taxpayer's NOL for any taxable year ending in 2008, or if elected by the taxpayer, the NOL for any taxable year beginning in 2008.

Smart Grid

- **The legislation provides a 30% tax credit for property designed to produce energy conservation technologies (including energy-conserving lighting technologies and smart grid technologies) (Div. B, Section 48C, Page 10)**
- **This has the potential to increase the use of time-of-use pricing, enabling PV system owners to realize energy savings faster.**

3. Enhanced funding for Infrastructure and State Programs

- Federal funds will be directed to States for distribution. State agencies will provide access to funds.**

Solar on Federal Property

- **Appropriates \$5.5 billion to construct, repair and make alterations on federal buildings including installing solar energy equipment.**
- **\$4.5 billion shall be available for measures necessary to convert GSA facilities to high-performance green buildings.**
- **Appropriates \$1 billion for non-recurring maintenance on Veterans Affairs facilities, including energy projects.**
- **Funds unlikely to go to wind.**
- **If even 1/5th of these funds are use for PV, this could result in 150 MW on federal property.**

Department of Energy Funding

- **Appropriates \$16.8 billion to DOE's Office of Energy Efficiency and Renewable Energy**
- **\$2.5 billion for applied research, development, demonstration, and deployment projects.**
- **Conservation block grants \$3.2 billion**
- **Weatherization \$5.0 billion**
- **State Programs \$3.1 billion**
- **Batteries \$2.0 billion**

New Clean Renewable Energy Bonds (“New CREBs”)

- **Provides an additional \$1.6 billion for new clean renewable energy bonds to finance facilities that generate electricity from renewable energy sources including solar facilities.**

Qualified Energy Conservation Bonds

- **Authorizes an additional \$2.4 billion in bonds to finance State, municipal and tribal government programs to reduce greenhouse gas emissions.**
- **These bonds can be used by government agencies to reduce energy consumption in publicly-owned buildings by at least 20 percent, implement green community programs, or develop electricity from renewable energy resources.**

Solar for Schools

- **Appropriates \$53.6 billion to a state fiscal stabilization fund. Specifies that states shall use 18.2% (\$9.75 Billion) of this money for public safety and other government services, including the renovation of facilities and schools to meet green building standards. Solar energy projects qualify.**

Solar Water Treatment Plants

- **Provides \$6 billion for the State and Tribal Assistance Grants account to fund construction projects in the next 12 months.**
- **The bill requires that not less than 20 percent of each Revolving Fund be available for projects to address green infrastructure, water and/or energy efficiency, or other environmentally innovative technologies.**

Solar for the Military

- **Appropriates \$300 million for DOD research, development, testing and evaluation of projects to improve energy generation, transmission, and energy efficiency.**
- **Appropriates an additional \$100 million for Navy and Marine Corps facilities, and further specifies that funds are for energy efficiency and alternative energy projects.**

Green Collar Jobs

- **Appropriates \$500 million to fund job training programs in energy efficiency and renewable energy. (Div. A, Title VIII, p. 148) Also appropriates \$250 million for rehabilitation and construction projects on Job Corps Centers, including energy efficiency and renewable energy projects. (Div. A, Title VIII, p. 150)**

Agency specific appropriations

- **Funds directed to specific agencies for programs or projects that are most likely already in the pipeline.**

Department of Interior Funding

- **Appropriates \$125 million to BLM for the management of lands and resources and suggests funds be used for renewable energy rights-of-way and related permitting projects. (Div. A, Title VII Interior, p. 133)**

Electric Transmission Infrastructure

- **Allows Western Area Power and Bonneville Power Administrations to borrow funds (up to \$3.25 billion each) to construct or finance transmission lines. (Div. A, Sec. 408, p. 65)**
- **Directs the DOE to include analysis of renewable energy sources, including solar, in its 2009 National Electric Transmission Congestion Study. (Div. A, Sec. 408, p. 80)**

Near Term Legislation

- **Energy Bill**

- Renewable Portfolio Standard
 - DG carve out
- Interconnection/Net Metering
- Additional tax incentives
 - Reduce/eliminate income tax for US solar companies
- Federal power purchase: 30 year authority
- Remove restrictive homeowner association covenants
- Restrict high-cost permits for residential installations

Near Term Legislation

- **Global Warming**

- Optimize to maximize solar deployment and generation
- Carbon policy must recognize and monetize solar's carbon-free attributes
 - Creates collateral “income stream” that surpasses current government support policies

- **Transportation – Green-T**

- Plug-in hybrid solar incentive
- Infrastructure spending

PV America 2009

- Presented in partnership with IEEE
- Vertically integrated tradeshow and conference focused exclusively on photovoltaics
- Designed to engage industry professionals in expanding the U.S. solar energy market, *with all show profits reinvested back into state and federal advocacy*
- Tracks include Markets, Finance, Policy and Emerging Business Opportunities
- June 8-10, 2009 - Philadelphia