



U.S. DEPARTMENT OF  
**ENERGY**

# ***The American Recovery & Reinvestment Act (H.R. 1)***

*Opportunities for Hydrogen and Fuel Cells*

*Briefing for HTAC*

February 18, 2009

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## American Recovery & Reinvestment Act

- Passed by House and Senate Feb 13, 2009
- Signed by President Obama Feb 17, 2009
- \$789 B total, including
  - \$16.8 B for Energy Efficiency and Renewable Energy
  - \$2 B for DOE Office of Science (including \$400 M for the Advanced Research Projects Agency)
  - \$3.4 B for Fossil Energy R&D
  - \$4.5 B for Electricity Delivery & Energy Reliability (Smart Grid)
  - \$6 B for Loan Guarantee Program
  - \$5.6 B for GSA (includes high performance green federal buildings and fleets)
  - \$300 M for DoD Energy research, including fuel cells



*EERE received \$16.8 billion in funding.*

<b>\$16.8 B Total EERE</b>	
\$2.5 B	Research, development, demonstration and deployment (\$1.2 B specified for biomass and geothermal)
\$5 B	Weatherization
\$3.1 B	State Energy Program
\$3.2 B	Energy Efficiency and Conservation Block Grants
\$400 M	Transportation Electrification
\$300 M	Alternative Fueled Vehicles Pilot (Clean Cities)
\$2 B	Advanced Battery Manufacturing
\$300 M	Energy Efficient Appliance Rebate Program/EnergyStar



## *Some tax credits affecting fuel cells were expanded.*

<b>Conference Bill</b>	
Hydrogen Fueling Facility Credit	Increases the hydrogen fueling credit from 30% or \$30,000 to 30% or \$200,000.
Grants for Energy Property in Lieu of Tax Credits	Allows facilities with insufficient tax liability to apply for a grant instead of claiming the ITC or PTC. Only entities that pay taxes are eligible.
Manufacturing Credit	Creates 30% credit for investment in property used for manufacturing fuel cells and other technologies
Residential Energy Efficiency Credit	Raises ITC dollar cap for residential fuel cells in joint occupancy dwellings to \$3,334/kW.



*Many provisions offer funding opportunities for fuel cells, even if not specifically mentioned.*

Application	Funded Opportunity	Amount
Stationary fuel cells for CHP (hot water and power)	Energy efficiency improvements in federal buildings and HUD housing	\$4.5 B (federal) \$250 M (HUD)
Vehicles and fueling infrastructure	Alternative fueled vehicles for Clean Cities and GSA federal fleets	\$300 M (Clean Cities) \$300 M (GSA)
Development of hydrogen and fuel cell industry	State Energy Program	\$3.1 B
Hydrogen for grid storage	Smart Grid programs	\$4.5 B
Forklifts	efficiency improvements at DoD facilities, and electrification infrastructure at ports	\$3.7 B (DoD) \$400 M (electrification)
All	Loan guarantees for projects to reduce pollution and GHGs including fuel cells for residential, industrial or transportation applications.	\$6 B



Hydrogen and fuel cell solutions should be promoted in funded areas where the technology makes sense.

# Additional Information



Item	Conference	House	Senate
<i>Bill Total</i>	\$789 B	\$ 819 B	\$825 B
EERE	\$16.8 B	\$18.5 B	\$14.4 B
Schools and hospitals	\$0	\$1 B	\$1.6 B
PHEVs and electrification infrastructure, including ports	\$400 M	\$200 M	\$200 M
State Energy Program	\$3.1 B	\$3.4 B	\$500 M
Smart Grid activities	\$4.5 B	\$4.5 B	\$4.5 B
Federal building efficiency	\$4.5 B	\$6 B	\$6 B
Efficiency Retrofits at HUD-assisted housing	\$250 M	\$1 B	\$1.3 B
Efficiency and Renewable Energy at DoD facilities	\$3.7 B*	\$1.8 B	\$613 M
GSA Federal Fleet acquisition	\$300 M	\$600 M	\$600 M
Clean Cities vehicle acquisition (includes infrastructure)	\$300 M	\$400 M	\$350 M
Innovative Technology Loan Guarantee Program	\$6 B	\$8 B	\$9.5 B

\* Includes repair, modernization and energy efficiency



## **SEC. 1103 REPEAL OF LIMITATION ON PROPERTY FINANCED BY SUBSIDIZED ENERGY FINANCING**

Eliminates reduction of energy property basis for subsidized energy projects after 12/31/08

## **SEC. 1111 - INCREASED LIMITATION ON ISSUANCE OF NEW CLEAN RENEWABLE ENERGY BONDS**

Increases limit on Clean Renewable Energy bonds to \$1.6 billion. Bonds can be issued by power providers and government electric coops. Qualified facilities include those eligible for the Investment Tax Credit.

## **SEC. 1122 - MODIFICATION OF CREDIT FOR RESIDENTIAL ENERGY EFFICIENT PROPERTY**

Modifies existing Investment Tax Credit residential fuel cells (placed in service in January 2009 and limited to joint occupancy dwellings) by increasing dollar cap to \$3,334/kW.

## **SEC. 1123 - TEMPORARY INCREASE IN CREDIT FOR ALTERNATIVE FUEL VEHICLE REFUELING PROPERTY.**

Until Jan 1, 2011 the tax incentive for hydrogen fueling stations will be 30% up to \$200,000. (Increased from \$30,000)

## **SEC. 1302. CREDIT FOR INVESTMENT IN ADVANCED ENERGY FACILITIES**

Creates a 30% credit for investment in property used for manufacturing fuel cells and other alternative energy technologies.

## **SEC. 1603. GRANTS FOR SPECIFIED ENERGY PROPERTY IN LIEU OF TAX CREDITS**

Between 2009 and 2010, facilities with insufficient tax liability can apply for a grant instead of claiming the ITC. Only tax-paying entities are eligible.





*The stimulus bill provides incentives and opportunities for hydrogen and fuel cell technology commercialization and jobs.*

## House Bill (H.R.1)

- Passed 1/28/2009
- Total of \$819 B
- \$18.5 B for Energy Efficiency and Renewable Energy, including:
  - o \$2 B for research, development, demonstration and deployment (\$800M biomass, \$400M geothermal, \$800M other)
  - o \$6.2B for weatherization
  - o \$6.9 B for state programs
- \$350 M for DoD Energy research, including fuel cells

## Senate Bill (S.336)

- Passed 2/10/2009
- Total of \$825 billion
- \$14.4 B for Energy Efficiency and Renewable Energy, including
  - o \$2.6 B for research, development, demonstration and deployment
  - o \$2.9 B for weatherization
  - o \$4.7 B for state programs
- Expected to create or sustain over 4 million jobs
- Energy (\$49 billion) is one of five critical focus areas