



# NATIONAL IDLING REDUCTION NETWORK NEWS

**July 2009** 

#### **SOLICITATIONS FOR FUNDING AND AWARDS**

[Red text indicates a new entry compared to last month.]

Organization	Project	Funding	Deadline	Website
Allegheny County (Pennsylvania) Health Department	Allegheny County Diesel School Bus Retrofit Program	\$500,000	Rolling deadline until funds are awarded.	http://www.achd.net/air/air.html and go to "School Bus Retrofit Program" on the right side of the screen
California Air Resources Board (CARB)	On-Road Heavy-Duty Vehicle Loan Program	~\$48 million for loan guarantees	Rolling deadline until funds are awarded.	http://www.arb.ca.gov/ba/loan/on- road/documents/hdvloanprogram.pdf
Climate Trust	Greenhouse Gas Offset Projects	\$8 million	Rolling deadline until funds are awarded.	http://www.climatetrust.org/apply.html
Efficiency Maine	Small Business Low Interest Loan Program	Indetermi- nate	Rolling deadline until funds are awarded.	http://www.efficiencymaine.com/business_programs_sblilp.htm
Florida Department of Environmental Protection	Clean Diesel Rebate Program	\$300,000	Rolling deadline until funds are awarded.	http://www.dep.state.fl.us/air/emission/msc/diesel_rebate.htm
North Central Texas Council of Governments (NCTCOG)	Heavy-Duty Vehicle and Equipment Grant Program	\$10.7 million	Rolling deadline until funds are awarded.	http://www.nctcog.org/trans/air/programs/terp/ hdvegp/
Pittsburgh Public Schools, the Heinz Endowments, Clean Water Action, Group Against Smog and Pollution, and the Clean Air Task Force	Pittsburgh Healthy School Bus Fund	\$500,000	Rolling deadline until funds are awarded.	http://www.dieselretrofitrebate.org



Organization	Project	Funding	Deadline	Website
New York State Energy Research and Development Authority (NYSERDA)	Clean Energy Business Growth & Development Program Opportunity Notice 1260	\$6.4 million	Rounds close on August 5, 2009, and January 6, June 2, and November 3, 2010	http://www.nyserda.org/funding/1260pon.pdf
Wisconsin Department of Natural Resources	ARRA Wisconsin Clean Diesel Grant Program	\$1.73 million	August 3, 2009	http://dnr.wi.gov/air/mobile/CleanDieselGP.htm
U.S. Department of Energy (DOE)	Energy Efficiency and Conservation Block Grants – Recovery	\$3 billion	August 10, 2009 (deadline extended)	http://www.grants.gov/search/search.do?mode= VIEW&flag2006=false&oppId=46340 or https://www.fedconnect.net/FedConnect/PublicPages/PublicSearch/Public Opportunities.aspx
Pennsylvania Department of Environmental Protection	Innovative Clean Diesel/Alternative Fuels Grant Program for cleaner ground service equipment at Pennsylvania airports	~\$500,000	August 14, 2009	http://www.depweb.state.pa.us/news/cwp/view.asp?a=3&q=547809
Transportation Research Board	National Cooperative Freight Research Program Truck Idling Scoping Study	\$200,000	August 21, 2009	http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2671
NYSERDA	Project Implementation Funding for State Energy Program American Recovery and Reinvestment Act (ARRA) Request for Proposals (RFP) 1613	\$74 million	Rounds close on August 24, October 26, and December 21, 2009, and February 16, 2010	http://www.nyserda.org/funding/1613rfp.asp
Arkansas Department of Environmental Quality	Reduce Emissions from Diesels (Go RED!)	\$1.5 million	August 31, 2009	http://www.adeq.state.ar.us/poa/gored/go_red.a sp



Organization	Project	Funding	Deadline	Website
DOE	Systems Level Technology Development, Integration, and Demonstration for Efficient Class 8 Trucks (SuperTruck) and Advanced Technology Powertrains For Light-Duty Vehicles	\$240 million	September 9, 2009	http://www07.grants.gov/search/search.do;?oppld=47867&flag2006=false&mode=VIEW
Tennessee Department of Transportation	Truck stop electrification	\$2 million	September 11, 2009	http://www.tdot.state.tn.us/environment/policy/ts e.htm
U.S. Department of Transportation (DOT)	TIGER (Transportation Investment Generating Economic Recovery) Discretionary Grants	\$1.5 billion	September 15, 2009	http://www.dot.gov/recovery/ost/
NYSERDA	Advanced Transportation Technologies PON 1520	\$2 million	September 16, 2009	http://www.nyserda.org/funding/1520pon.asp
New York State Department of Transportation (NYSDOT) and NYSERDA	Energy Efficient Transportation Systems Program PON 1554	\$1.5 million	September 17, 2009	http://www.nyserda.org/funding/1554pon.asp
Ontario (Canada) Ministry of Transportation	Green Commercial Vehicle Program	Can\$2.9 million	March 31, 2012	http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/s sbforms.nsf/AttachDocsPublish/023- 05002E~3/\$File/05001-2E_ProgramGuide.pdf

#### **REGULATORY NEWS**

## Oregon's HB 2186 Is Law

Oregon Governor Ted Kulongoski has signed House Bill (HB) 2186, which authorizes the development of a low carbon fuel standard. The

bill requires reduction in emissions from ships at port, as well as study by the Department of Environmental Quality on measures to reduce



idling and aerodynamic drag on long-haul trucks. Recommendations are to be made to the legislature by October 2010. Please see http://governor.oregon.gov/Gov/P2009/press\_072209.shtml and

http://www.landlinemag.com/todays\_news/Daily/2009/July09/070609/070709-02.htm.

### California's Proposed SB 124 Would Codify CARB Regulation

California's Senate Bill (SB) 124, a measure that would prohibit bus drivers from idling within 100 feet of a school and require that bus drivers restart their engines no more than 30 seconds before departing, has been sent to the Assembly floor. If passed into law, SB 124 would codify the California Air Resources Board's (CARB) statewide regulation to limit idling of transit and delivery vehicles at

schools. The first violation would result in a minimum \$300 fine; subsequent violations could result in civil and criminal penalties. Please visit

http://dist28.casen.govoffice.com/index.asp?Type=B\_PR&SEC={1581 55BF-B41C-452C-A7E3-439790D3B207}&DE={49260277-6DCC-4B41-93BC-3218E4DB9E45} for more information.

#### AWARDS AND RECOGNITION

### Recovery Act Funding Awards

Using its American Recovery and Reinvestment Act of 2009 (Recovery Act or ARRA) funding under its State Clean Diesel Grant Program, EPA has made \$1.73 million available to each State and the District of Columbia. A list of the State agency grantees for EPA's State Clean Diesel Grant Program is at

http://www.epa.gov/oms/eparecovery/progstate.htm. Listed below are any Recovery Act funds granted for which idle-reduction components have been explicitly described. If you have idle-reduction funding award news, please send it to <a href="mailto:idlingreduction@anl.gov">idlingreduction@anl.gov</a>.

Organization	Purpose of Grant	Total Funding
American Lung Associations in Alabama,	Replacement of older, more-polluting vehicles and installation of idle-	\$1,118,142
Georgia, Kentucky, North Carolina, South	reducing, battery-powered air conditioners	
Carolina, Tennessee, and Florida		
American Lung Association—Upper	Reduction of diesel emissions for vehicles in public and private	\$3.7+ million
Midwest	fleets; technologies include repowers, retrofits, and idle reduction	



Organization	Purpose of Grant	Total Funding	
Cascade Sierra Solutions	Emission-control solutions, including auxiliary power units (APUs), for over-the-road diesel trucks based in Utah, Montana, Colorado, and South Dakota	\$850,000	
Cascade Sierra Solutions	Great SmartWay Rebate Program (idle-reduction devices included)	\$1.1 million	
National School Transportation Association	Replacement of older school buses and installation of emission controls and fuel-operated heaters on other buses in Wisconsin and Minnesota	\$2.4 million	
Colorado—Denver Regional Air Quality Council	Emission-reduction projects, including the installation of APUs, fuel- operated heaters, and thermal coolers	\$1,250,000	
Colorado Department of Public Health and Environment	APUs or battery air-conditioning systems for long-haul trucks	\$850,000	
Colorado—City and County of Denver	Retrofits, including installation of fuel-operated hydraulic and cab heaters	\$700,000	
California Air Resources Board (CARB)	Repowering of eight switchyard locomotives that operate with new Tier 3 engines	\$8,888,888	
Florida—Leon County School Board	New compressed natural gas school buses, repowering of existing school buses, and developing and providing idle-reduction training	\$347,288	
Georgia Department of Natural Resources	Truck stop electrification technology	\$748,000	
Illinois Environmental Protection Agency	Clean up of on- and off-road diesel vehicles and equipment; technologies include APUs	~\$4.2 million	
Illinois—Chicago Department of Environment	Diesel emissions reduction projects, including purchase and installation of diesel-fired heaters	\$1 million	
Kentucky Association of General Contractors	Retrofit and repower and promotion of adoption of anti-idling practices	\$2 million	
Maine Turnpike Authority	Truck stop electrification technology	\$1,209,100	
Mississippi—Columbus schools	Replacement school buses and installation of direct fire heating units in other buses	\$1,445,851	
Missouri—Grace Hill for the North St. Louis Impact on Diesel Emissions (SLIDE) program	Diesel emission reduction technologies and idle reduction technologies	\$2 million	
Nebraska—Lincoln-Lancaster Health Department	Retrofitting of diesel vehicles and equipment, emergency generators, and public school buses, and repowering of eight switch engines	\$1 million	



Organization	Purpose of Grant	Total Funding
New Hampshire—DERA grant applicants	Idle-reduction projects	\$380,955
New Mexico—Albuquerque	Upgrade of ground-support equipment (replacing diesel-powered equipment with electric equipment) at the city's airport	\$583,125
New York and New Jersey Port Authority	Shore power at the Brooklyn Cruise Terminal	\$2,858,200
North Dakota—Mid-Dakota Education Cooperative	Emission-control solutions for school buses, including installation of fuel-operated heaters	\$450,000
Oregon—City of Portland	Reduction of diesel emissions from municipal vehicles and construction contractor equipment and installation of fuel-operated heaters on 237 vehicles	\$1.6+ million
Utah Department of Environmental Quality	Repowering of engines in agricultural vehicles and equipment and installation of APUs on agricultural vehicles	\$750,000
Washington—Port of Tacoma	Retrofit of two vessels with certified ship-side technology and the addition of alternative maritime power at one terminal	~\$1.5 million
Washington—school districts, public utilities, transit authorities, and the Department of Transportation	Emissions reduction projects, including installation of preheaters with timers on some buses	\$300,000
Wisconsin Department of Commerce	Idle reduction for heavy-duty diesel trucks	\$2+ million

# Port of Long Beach Receives Clean Air Award

On July 15, 2009, the Port of Long Beach won *Sustainable Shipping*'s Clean Air Award for efforts to reduce air pollution from ships through slower speeds, cleaner fuels, and shore power. Please see <a href="http://www.sustainableshipping.com/events/2009/london/winners.html">http://www.sustainableshipping.com/events/2009/london/winners.html</a>

and

http://www.polb.com/news/displaynews.asp?NewsID=578&targetid=1 for more information.



#### **UPCOMING MEETINGS AND EVENTS**

[Red text indicates a new entry compared to last month.]

Meeting	Location	Date	Website or Contact
15 <sup>th</sup> Directions in Engine- Efficiency and Emissions Research Conference	Dearborn, Michigan	August 3–6, 2009	http://www1.eere.energy.gov/vehiclesandfuels/resources/conferences/deer/index.html
25 <sup>th</sup> Clean Air Conference	Estes Park, Colorado	September 21–24, 2009	http://www.ncvecs.colostate.edu/cac.docs/cac23/CAC23Home.htm
Sustainable Shipping Conference	San Francisco, California	September 29-October 1, 2009	http://www.sustainableshipping.com/events/2009/sanfrancisco/?tag=21- 17181-4355457-0
Society of Automotive Engineers Commercial Vehicle Engineering Congress and Exhibition	Rosemont, Illinois	October 6–7, 2009	http://www.sae.org/cve
Hybrid Truck Users Forum National Conference	Atlanta, Georgia	October 27– 29, 2009	http://www.calstart.org/Projects/Hybrid-Truck-Users-Forum.aspx or ddubose@calstart.org
TRB 89th Annual Meeting	Washington, D.C.	January 10– 14, 2010	http://www.trb.org/AnnualMeeting/default.asp

#### MANUFACTURERS' NEWS

### Espar's Large Hydronic M II Coolant Heater Wins CARB Approval

Espar has received CARB approval for its large Hydronic M II series of heaters, which includes the Hydronic 8, 10, and 12 (27,300 BTU/hr, 32,450 BTU/hr, and 42,000 BTU/hr, respectively). These coolant heaters are particularly well suited to school buses and transit and

motor coach buses. According to Espar, the heaters enable warm starts, and buses may be preheated and windows defrosted without engine idling. More information is available at <a href="https://www.espar.com">www.espar.com</a>.



#### ClimaCab and Webasto Partner for Climate-Control Solution

ClimaCab and Webasto have partnered to offer an idle-free climatecontrol solution for heavy-duty trucks. Glacier Bay's electric air conditioning system, ClimaCab, and Webasto's Air Top 2000 ST heater are integrated into a package that provides control of sleeper cab environment year-round. Glacier Bay will be the supplier for all system sales, parts, service, and warranty needs. Please go to <a href="http://www.glacierbay.com/news/press\_releases.html">http://www.glacierbay.com/news/press\_releases.html</a> for more details.

#### **ELECTRIFIED PARKING SPACES**

#### NATSO Offers Online TSE Resource

The National Association of Truck Stop Operators (NATSO) is now offering an Idle Reduction/Truckstop Electrification Toolkit on its website. Listed are funding opportunities and incentives. Although private truck stops are not directly eligible for Federal funding, private

truck stop and travel plaza owners may partner with eligible entities such as regional, State, local, or tribal agencies or nonprofit organizations. Please see <a href="http://www.natsofoundation.org/toolkit/">http://www.natsofoundation.org/toolkit/</a> for more information.

#### **PORTS**

### New York and New Jersey Port Approves Clean Air Program

The Port Authority of New York and New Jersey received two grants from the EPA, totaling \$9.8 million, and another \$1.8 million grant from the North Jersey Transportation Planning Authority to implement the first pieces of a Comprehensive Clean Air Strategy for the port. A \$7 million Federal grant will help launch a \$28 million program to replace pre-1994 model year trucks serving the port. The EPA grant, and an additional \$21 million incentive fund from the Port Authority, will enable truck owners serving the port to replace their pre-1994 trucks with newer, less polluting vehicles.

In addition to the truck program grant, the Port Authority received \$2.8 million from the EPA to support the installation of shore power at the Brooklyn Cruise Terminal. This terminal would be the first on the East Coast to provide shore power to docked vessels. At an estimated cost of \$2 million, Carnival Cruise Lines has committed to reconfiguring two cruise vessels that frequently call at the terminal to receive shore power. Please click on

http://www.panynj.gov/AboutthePortAuthority/PressCenter/PressRele ases/PressRelease/index.php?id=1266 for more information. *Source*: Joe Tario, NYSERDA



#### REPORTS OF INTEREST

Source	Title	Website or Contact
EPA	Truck Stop Electrification and Anti-Idling as	http://www.epa.gov/usmexicoborder/docs/reports/OtayTruckStopElectrification
	a Diesel Emissions Reduction Strategy at	Report2009.pdf
	U.SMexico Ports of Entry	
Center for	The Impacts of Port, Rail, and Border	http://www.trb.org/news/blurb_detail.asp?id=10654&utm_medium=etmail&utm
Transportation	Drayage Activity in Texas	_source=Transportation%20Research%20Board&utm_campaign=TRB+E-
Research at the		Newsletter+-+07-28-2009&utm_content=Web&utm_term
University of Texas-		
Austin		
Science of the Total	Associations of PM2.5 and Black Carbon	http://www.ncbi.nlm.nih.gov/pubmed/19250655?ordinalpos=2&itool=EntrezSy
Environment	Concentrations with Traffic, Idling,	stem2.PEntrez.Pubmed_
2009;407(10):3357–	Background Pollution, and Meteorology	ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum
3364	During School Dismissals	(abstract)
International Journal	Use of a Remote Car Starter in Relation to	http://www.ncbi.nlm.nih.gov/pubmed/19440410
of Environmental	Smog and Climate Change Perceptions: A	(abstract)
Research and Public	Population Survey in Quebec (Canada)	
Health		
2009;6(2):694–709		

#### OTHER NEWS OF INTEREST

### SmartWay Manager Heads off to Greener Pastures

Mitch Greenberg, who has led the EPA SmartWay Transport Program since its inception, has left EPA to join a start-up aerospace engineering firm. The new company focuses on developing designs and products to improve the fuel efficiency of Class 8 trucks. The new effort transfers advanced aerodynamic and mechanical design and

testing methods used in the aerospace industry to ground transportation. Mitch is joining a group of aerospace and mechanical engineers, led by Mike Henderson who was the former Chief of Research at Boeing.



Cheryl Bynum is now serving as Acting Group Manager of the SmartWay Transport Group until a permanent replacement is hired. She previously led the SmartWay technology team, where she was instrumental in developing specifications for the SmartWay certified

tractor and trailer, among other things. Cheryl began her career in the shipping and freight industry and is committed to moving SmartWay and the industry forward. *Sources*: Mitch Greenberg and Annie Kee, EPA SmartWay

#### **RECURRING FEATURES**

### How to Find Back Issues of National Idling Reduction Network News

If you are a new subscriber or have misplaced an issue of this newsletter, all issues are located at <a href="http://www1.eere.energy.gov/vehiclesandfuels/resources/fcvt\_national\_idling.html">http://www1.eere.energy.gov/vehiclesandfuels/resources/fcvt\_national\_idling.html</a>. Please update your bookmarks accordingly.

Also, be mindful that web links may expire or move over time and some sources require registration. If you have trouble opening a link, try copying and pasting it, or retype it in the address box of your browser.

### Tools Now Available to Calculate Cost of Idling Reduction Equipment

Among the tools available to workplace and truck fleet managers, owner-operators, and locomotive engineers are calculators to help determine the cost and benefits of installing and paying for idling reduction equipment. Included also is a site from Canada that quantifies the costs of workplace idling. Here are a few sites that might be of benefit to you. Any new entry this month is shown in red.

- Argonne National Laboratory (http://www.transportation.anl.gov/pdfs/TA/361.pdf)
- Authotherm (http://www.autothermusa.com/idle\_calc.html)
- Cummins (http://www.cumminscomfortguard.com/offer)
- DOE Clean Cities program (<a href="http://www.afdc.energy.gov/cleancities/ccn/progs/story.php/W">http://www.afdc.energy.gov/cleancities/ccn/progs/story.php/W</a> HATS\_NEW/862/0/A)

- EPA (http://www.epa.gov/otaq/smartway/calculator/loancalc.htm)
- Espar (http://www.espar.com/html/service/calculator/calculator.html)
- Fraser Basin Council
   (http://web.memberclicks.com/mc/page.do;jsessionid=d0301a
   9d9869fa88bfd51e50592a377d5d48?sitePageId=40919&orgId=clcc)
- Kenworth (<u>http://www.kenworth.com</u>)
- Kim Hotstart (http://www.kimhotstart.com/66/)
- Kohler Power Systems (http://www.kohlerpower.com/mobile/solutions/apucalculator.ht m?sectionNumber=13361&nodeNumber=1&contentNumber=1 02)



- Natural Resources Canada (<a href="http://oee.nrcan.gc.ca/transportation/tools/calculators/ldling/idlingimpact-workplace.cfm?attr=16">http://oee.nrcan.gc.ca/transportation/tools/calculators/ldling/idlingimpact-workplace.cfm?attr=16</a>)
- Teleflex APUs (<a href="http://www.teleflexpower.com/tb">http://www.teleflexpower.com/tb</a> idle\_calculator\_usapu.php)
- Teleflex auxiliary heaters
   (<a href="http://www.teleflexpower.com/tb\_idle\_calculator\_usheater.php">http://www.teleflexpower.com/tb\_idle\_calculator\_usheater.php</a>)
- Thermo King (<a href="http://www.thermoking.com/tripac/">http://www.thermoking.com/tripac/</a>)

Webasto
 <a href="mailto:(http://www.techwebasto.com/calculators/heater/heater\_fuel\_c">(http://www.techwebasto.com/calculators/heater/heater\_fuel\_c</a>
 alculator us.htm)

Please let us know if you are aware of other sources that the readers of this newsletter might want to know about.

### Summary of State Anti-Idling Regulations

The most up-to-date lists of anti-idling regulations in States and municipalities, updated in June 2009, are available at <a href="http://atri-online.org/index.php?option=com\_content&view=article&id=164&Itemid=70">http://atri-online.org/index.php?option=com\_content&view=article&id=164&Itemid=70</a>. If your State or municipality has changed anything listed on this

site or if the information listed is in error, please let us know, and we'll make sure to inform our readership. This newsletter is also a place to let people know that you are thinking of adding or changing regulations and are soliciting comments.

### Incentives and Funding Opportunities for Idling Reduction Projects

The DOE Clean Cities program provides a listing of Federal and State programs that offer incentives and funding for idling reduction projects. Further information can be found at <a href="http://www.eere.energy.gov/afdc/progs/fed\_summary.php/afdc/US/0">http://www.eere.energy.gov/afdc/progs/fed\_summary.php/afdc/US/0</a>. Let us know if the information needs to be changed or updated.

The West Coast Diesel Collaborative has a comprehensive listing of grant and loan programs available from many States to purchase or apply for a loan for on-board idling reduction equipment. For the listing of these programs, please go to <a href="http://www.westcoastdiesel.org/programs.htm">http://www.westcoastdiesel.org/programs.htm</a>.

### Clean Cities, SmartWay Websites Show Locations of Electrified Parking Spaces

In collaboration with the U.S. Department of Transportation, the DOE Clean Cities program has a website showing the locations of public truck stops that have idling reduction facilities for heavy-duty trucks. These facilities are available in 34 States. CabAire, IdleAire, and

Shorepower Technologies installations are listed in this locator. Please go to <a href="http://www.afdc.energy.gov/afdc/progs/tse\_listings.php">http://www.afdc.energy.gov/afdc/progs/tse\_listings.php</a> to access that information.



The EPA SmartWay Interactive Activity Map features data from SmartWay Partners, National Transportation Idle-Free Corridors, National Clean Diesel Campaign Retrofit Projects, School Bus USA projects, ethanol (E-85) and biodiesel fueling stations, State idling laws, and other related data. The maps enable you to visualize the

location of projects for specific fuel consumption and pollution reduction projects. The maps also help truck drivers to find the nearest electrified truck stop and help you to find the nearest public alternative-fuel filling station. For more information, please go to <a href="http://epamap10.epa.gov/website/irim\_us\_map.asp">http://epamap10.epa.gov/website/irim\_us\_map.asp</a>.

### Status of 400-Pound Weight Exemption for Idling Reduction Devices

[Ed. note: The Energy Policy Act of 2005 allowed for a national 400-pound exemption for the additional weight of idling reduction technology on heavy-duty vehicles. Each State can adopt this exemption, at its own discretion, without being subject to any penalty provision related to withholding of highway trust fund monies.]

The table below is based on one created by the Federal Highway Administration in 2008, and we have updated it as we have become aware of changes. As time permits, URLs will be provided so that interested parties, such as trucking companies, can work with their State trucking associations to make sure that enforcement officials are aware of changes in the laws. Please feel free to provide us with updates.

Alabama	<b>District of Columbia</b>	Kansas	Mississippi	New York	South Carolina	West Virginia
Alaska	Florida	Kentucky	Missouri	North Carolina	South Dakota	Wisconsin
Arizona	Georgia	Louisiana	Montana	North Dakota	Tennessee	Wyoming
Arkansas	Hawaii	Maine*	Nebraska	Ohio	Texas	
California	Idaho	Maryland	Nevada	Oklahoma	Utah	
Colorado	Illinois	Massachusetts	New Hampshire	Oregon	Vermont	
Connecticut	Indiana	Michigan	New Jersey	Pennsylvania	Virginia	
Delaware	Iowa	Minnesota	New Mexico	Rhode Island	Washington	

States in **black** allow the 400-lb weight exemption; states in **gray** do not permit the exemption.

<sup>\*</sup> Effective September 17, 2009.



#### **Editor**

Terry Levinson, Argonne National Laboratory, (202) 488-2472, <a href="mailto:tlevinson@anl.gov">tlevinson@anl.gov</a>

#### **Disclaimer**

This newsletter was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor UChicago Argonne, LLC, nor any of their employees or officers, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus,

product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.