

Biden highlights DOE patent offer during NREL visit

By [Kris Bevill](#) | May 23, 2011



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[President Barack Obama with Vice President Joe Biden speaks with CEO of Namaste Solar Electric Inc., Blake Jones, while looking at solar panels at the Denver Museum of Nature and Science in Denver, Colo., Feb. 17, 2009.](#)
Official White House Photo by Pete Souza

Vice President Joe Biden visited the U.S. DOE's National Renewable Energy Laboratory in Golden, Colo. on May 20 to highlight the White House's commitment to energy innovation and to announce the first option agreement signed under the DOE's new America's Next Top Energy Innovator challenge. Boulder, Colo.-based US e-Chromic LLC will apply electrochromic technology developed at NREL to create film window coverings that can be used to reflect sunlight, reducing cooling costs.

The innovator challenge, which was launched on March 29, allows start-up companies to license technologies developed by DOE National Laboratories for \$1,000, saving companies up to \$50,000 when compared to average upfront patent licensing fees, according to the DOE. Any of the 15,000 unlicensed patents and patent applications developed at the labs are available through this program. On May 2, the DOE made available a template option agreement online at its [Energy Innovation Portal](#). The discounted license offer is available through Dec. 15. Multiple biomass and biofuels technology licenses are up for grabs, including several that address pretreatment methods for biomass conversion and various cellulosic process technologies. According to the DOE, only about 10 percent of federal patents have been licensed for commercialization. This project is aimed at doubling that number.

In addition to the development of their own patents, DOE scientists also collaborate with private companies to research and develop their technologies. One such collaboration recently produced significant results in the area of biomass conversion for cellulosic ethanol production. After three years of testing, NREL researchers recently confirmed that a strain of Eucalyptus tree developed by ArborGen Inc. can be easily broken down for conversion to biofuels. Using an assay of simply hot water, researchers proved that the low-recalcitrance line of trees were able to release up to 99 percent of their sugars, opening up the opportunity for even more mild pre-treatment methods, according to Angela Ziebell, a research chemist at NREL's National Bioenergy Center. "There's a standard assay we do at NREL and these lines have theoretically perfect sugar release during that assay," she said. "These results are about as good as you can possibly get."

ArborGen scientists produced the low-lignin Eucalyptus by genetically modifying two points in the lignin biosynthetic pathway. While the modification of lignin often results in smaller plants, these modifications have so far proven to produce normal trees. "Of course they're not huge forests of trees that have been grown for decades, and things come up, but as far as we can see these are highly successful plants that will grow normally and that's definitely the exception to the rule when you talk about lowering lignin content extensively," Ziebell said.

NREL's next step in evaluating this type of modification is to research why it has proven so successful. "We've started to look into that and that's sort of an extensive area where we could continue the research," Ziebell said.

The DOE also recently reduced the upfront payment commitment for national lab research from 90 days to 60 days, which should make it easier for companies to collaborate with the federal facilities. The DOE stated that this change will benefit all companies, not just start-ups, but could be especially valuable for those participating in the energy innovator challenge.