

People & Places

# Solution to a burning problem

Hiroshi Morihara uses juniper, other biomass to replace coal in power plants

By ERIC MORTENSON  
Capital Press

GRESHAM, Ore. — Hiroshi Morihara jokes that his current project — finding a clean-fuel replacement for coal — was his wife's fault.

"Hiroshi," his wife, Mary McSwain, told him several years ago, "you look bored. Why don't you invent something again?"

On Oct. 18, Morihara's company announced it has refined a process for turning logging slash or other biomass into briquettes that can be burned in coal-fired electrical plants such as the one in Boardman, Ore. His company, HM3 Energy Inc., has built a \$4 million demonstration plant in Troutdale, Ore., just east of Portland. It plans to license the technology and sell it worldwide. A Japanese firm, New Energy Development Co., has invested \$2 million in HM3 and said it will build a production plant at an undisclosed location in Oregon.

The fuel is produced through a method called tor-



Eric Mortenson/Capital Press

Hiroshi Morihara believes briquettes made from woody biomass or crop residue can replace the coal used to produce electricity. His firm has developed the technology to produce the briquettes.

refaction, in which woody debris, crop residue or other plant material is essentially roasted in the absence of oxygen. The end product is a brittle, briquette-looking material that can be crushed and burned.

Morihara and others believe the briquettes can be a cleaner, "drop-in" replacement for coal, which is considered a dirty energy source. Portland General Electric, which operates the Boardman power plant, is looking for a

replacement fuel. Later this year, PGE will conduct a 24-hour test burn of torrefied biomass to see if it works.

The utility would need up to 8,000 tons of biomass fuel per day to replace the coal it now burns. Other companies are pursuing the technology; PGE is working with a coalition called Oregon Torrefaction to obtain the material it needs for the test burn.

The project potentially could become part of the

## Western Innovator

### Hiroshi Morihara

**Occupation:** Founder, president and CEO of HM3 Energy Inc., Gresham, Ore.

**Age:** 79, but "age is relative," he said.

**Personal:** Married to Mary McSwain. He's an expert skier and still teaches skiing at Mount Hood Meadow. He also runs, and has completed more than 50 marathons.

**What he's up to:** He and partners developed equipment to turn woody debris into briquettes that can be a "drop-in" replacement for coal and used to fire electrical generation plants. HM3 Energy built a demonstration plant in Troutdale, Ore., and intends to license the technology to companies that could build processing plants.

**Ag connection:** Invasive Western juniper trees could be a key feedstock for briquette plants. Ranchers, wildlife officials and land managers say removing junipers improves rangeland, restores watersheds and can improve habitat for sage grouse.

**Background:** Born in Japan, he was 8 years old when Japan surrendered to end World War II. Came to the U.S. to attend college, earned bachelor's and master's degrees in mechanical engineering from the University of Michigan-Dearborn, and a Ph.D. in mechanical engineering from the University of Buffalo.

**Professional life:** Worked for Union Carbide Corp. and on projects for the U.S. Department of Energy, helped start a silicon processing plant, ran a pair of biotech companies, owned a golf course. Claims he's retired three times.



West's solution to intrusive Western juniper. Part of HM3's grant funding came from the USDA as part of its search to find a use for juniper, and the fuel on display at the company's press tour this month was made from the gnarly wood.

Morihara said using log-

ging debris or material from forest thinning projects reduces the risk of catastrophic wildfire and could be part of an economic revival in rural Oregon.

"I wanted to make sure rural people have family wage jobs, and forestry is the best way," he said.

# 89th National FFA Convention & Expo

## Exeter FFA receives innovation award

National FFA Organization

INDIANAPOLIS — The Exeter FFA Chapter in California has been named the 2016 National Model of Innovation Chapter Award winner in community development at the 89th National FFA Convention & Expo in Indianapolis.

The nation's top 10 three-star chapters in the community development division competed for the award. Exeter FFA was awarded a plaque in an onstage ceremony during the second general session.

Top chapters were also selected from the middle school, student and chapter development divisions.

Exeter FFA wanted to do its part to combat hunger in their community. During the "Hunger Heroes Food Hunt," members were split into teams and assigned to a section of the city of Exeter. With adult drivers, the teams visited homes within their section to collect nonper-



Courtesy of FFA

More than 60,000 members of the FFA from around the national converged on Indianapolis last week for the organization's annual convention and expo. FFA members from across the West demonstrated their skills in many areas.

ishable food items for a local food bank. Many students and volunteer drivers participated in the event, collecting over 2,600 nonperishable food items

during the one-hour activity. All of the food items were donated to the local food closet following the event. Because of the FFA chapter's efforts, Exeter is

one step closer to eliminating hunger in the community.

The Models of Innovation awards are sponsored by John Deere.

## Yelm FFA named model of excellence winner

National FFA Organization

INDIANAPOLIS — The Yelm FFA Chapter in Washington has been named the 2016 National Model of Excellence Chapter Award winner at the 89th National FFA Convention & Expo in Indianapolis.

All chapters that receive national three-star ratings are eligible to compete for the national Model of Excellence award.

Yelm FFA received a plaque in an onstage ceremony during the convention and expo's second general session on Thursday. Top chapters were also selected from the middle school, student, chapter and community development divisions.

Yelm FFA was given a week by the Yelm High School administration to develop an event to distribute spirit materials for a "Pink Out" breast cancer awareness football game. Through the chapter's efforts, 368 Yelm High School students received pink face paint, hair dye or spirit materials and together created a "sea of pink" to raise breast cancer awareness among students, parents and community members.

As a result of the event, the chapter recruited six new FFA members who were inspired by the cause. This chapter also conducts other activities throughout the year, such as a leadership lock in, the McKenna Elementary Science Fair and a Hop for Hunger.

The Model of Excellence award is sponsored by John Deere as a special project of the National FFA Foundation.

## Western FFA ag proficiency winners announced

National FFA Organization

INDIANAPOLIS — The following Western FFA members national received proficiency awards at last week's FFA Convention and Expo.

• Diversified Livestock Production — Entrepreneurship/Placement: Ross Blattner.

Ross Blattner of the Kuna FFA Chapter in Idaho has an SAE project with 57 registered Suffolk ewes and three registered Suffolk stud rams. He's chosen the Suffolk breed because of their superior milking and mothering ability.

He's also raised 19 market heifers.

Blattner raises the heifers to market weight before selling them to buyers. He is supported by his parents, Lori and Jack,

and his FFA advisors, Shawn Dygert, Joe Blackstock, Travis Edward and Allison Touchstone.

This award is sponsored by Tractor Supply Co. and Wahl Clipper Corp.

• Equine Science — Entrepreneurship: Caleb Sloan McMillan.

For most of his life, Caleb Sloan McMillan of the Wilson Creek FFA Chapter in Washington has been training horses for rodeos and other equine events. He has trained for steer wrestling, calf roping and team roping. When he began learning about horses, his duties were restricted to feeding. Today, he manages all aspects of the operation, including feeding, medical checkups, fencing and tagging. McMillan is supported by his parents, Lynette and Mark, and his FFA adviser, Scott Mortimer.

This award is sponsored by Red Brand.

• Specialty Animal Production — Entrepreneurship/Placement: Jake Keith Bobo.

Jake Keith Bobo of the Baker FFA Chapter in Baker City, Ore., has been doing his SAE since the third grade. As a fourth-generation beekeeper, he bought his first pallet of bees with money he got from mowing lawns. In one year, his bees travel from California to Idaho to Washington and on to Montana before returning to Oregon. Bobo sells the honey he extracts before ending a production year with his bees. He is supported by his parents, Carolyn and Keith, and his FFA adviser, Bibiana Giffit. This award is sponsored by the National FFA Foundation and National FFA Organization.

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### Friday-Sunday Oct. 28-30

Oregon State Beekeepers Association Fall Conference 2016, The Oregon Garden, 879 W. Main St., Silverton, Ore. The theme for this conference is "Beekeeping Out of the Box." Other topics such as honeybee health will be covered as well. Speakers include Tom Seeley, George Hansen, Ramesh Sagili, John Skinner, Elina Nino, Judy Wu

and Miksa Queens. There will be a beginning beekeeping class running concurrently with the main meeting on Saturday. OSU will have a bee lab on site. <https://orsba.org>

### Saturday, Oct. 29

Cattle Producers of Washington annual meeting and banquet. 10 a.m.-8 p.m. Northern Quest Casino, 100 N Hayford Road, Airway Heights, Wash. The event will feature several speakers including Jim Robb of the Livestock Marketing Information Center who will share cattle market forecast predictions. Two national cattlemen's organizations that represent independent cow-calf producers will also speak at the event: Maggie Nutter from the U.S. Cattlemen's Association

will share on national topics related to trade, Country of Origin Labeling and public lands issues. R-CALF CEO Bill Bullard will be the dinner keynote speaker. Day tickets (includes lunch) are \$35, dinner tickets are \$45 (includes dinner rib dinner), an all-day and dinner ticket is \$75. [www.cattleproducersofwa.com](http://www.cattleproducersofwa.com)

### Sunday, Oct. 30

Farm Succession Planning Workshop. 4-8:30 p.m. Forest Grove United Church of Christ, 2032 College Way, Forest Grove, Ore. Hosted by Tualatin SWCD, Rogue Farm Corps and Dairy Creek Community Food Web. RSVP requested at 971-409-6806 or [nellie@roguefarmcorps.org](mailto:nellie@roguefarmcorps.org), <http://www.swcd.net/event/leaving-a-legacy/>

### Tuesday-Thursday Nov. 1-3

2016 NIAA Antibiotics Symposium. Antibiotic Use — Working Together for Better Solutions. National Institute for Animal Agriculture conference at Hyatt Regency Dulles, Herndon, Va. [animalagriculture.org/2016-Antibiotics-Symposium](http://animalagriculture.org/2016-Antibiotics-Symposium), call 719-538-8843 or email [niaa@animalagriculture.org](mailto:niaa@animalagriculture.org)

### Wednesday, Nov. 2

Oregon Blueberry Commission meeting. Noon. Chemeketa Events at Winema, Room 210, 4001 Winema Place, Salem. 503-399-6444

Oregon Orchardgrass Seed Producers Commission. 7:30 a.m.

Elmer's Restaurant, 2802 Santiam Highway SE, Albany, Ore. [www.orchardgrass.org](http://www.orchardgrass.org)

### Wednesday-Friday Nov. 2-4

Washington State Weed Conference, Wenatchee Convention Center, 121 N Wenatchee Ave. [www.weedconference.org](http://www.weedconference.org)

### Thursday, Nov. 3

Columbia Basin Development League annual meeting. 1-8 p.m. Big Bend Community College ATEC Building, 7662 Chanute St. NE, Moses Lake, Wash. Attendees will receive an update on the Columbia River Basin Project expansion. <http://www.cbdl.org>

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