

## Monetary roadblocks lessen nuclear prospects

Without increased government subsidies, many observers see little likelihood of new building, even if Minnesota's ban is removed.

By **RON WAY**

As Gov. Tim Pawlenty and a gaggle of DFL and Republican legislators press for nuclear-power development by initially removing Minnesota's ban on the controversial plants, a respected investment analyst has issued a sobering report on skyrocketing costs and sinking prospects of building nuclear generators.

In fact, it appears to many observers that the only way to advance nuclear power in the United States is to sharply increase government subsidies to an industry that's already far ahead of other electric-generating forms in receiving direct and indirect taxpayer support.

According to recent estimates, building a new nuclear plant is nearly four times more expensive than installing wind turbines and 2.5 times higher than coal-fired plants yielding equivalent electricity. And while uranium fuel for nuclear plants is inexpensive relative to coal and gas, wind has zero fuel costs.

"It's more than just the high cost of nuclear that will mean more subsidies," said state Rep. Jean Wagenius, DFL-Minneapolis, who chairs the House Environment and Natural Resources Finance Committee. Wagenius said that renewable sources like wind, solar, biomass and even geo-thermal are home-grown



REUTERS

Will more nuclear silos dot the U.S. countryside? These are in Grohnde, Germany.

industries that generate local dollars that remain local. Nuclear plants require uranium fuel that is mined elsewhere and shipped in, and most of the scientific support for building the plants would come from out of state.

### Many supporters don't favor subsidies

"It's interesting to me that so many of those who don't like subsidies and who don't like government regulation are pushing an industry that requires a lot of both," Wagenius said.

As Pawlenty has stumped for Republican presidential hopeful John McCain here and

nationwide, he has expressed steadfast support for nuclear power each time the energy issue is raised. Sen. McCain of Arizona is also a strong proponent of nuclear power.

In the Minnesota Legislature, Pawlenty's pro-nuclear stance is gaining traction, and advocates have been promised hearings in the Senate and House sometime early next year.

**continues on page 4**

### INSIDE



#### MINNPOST.WORLD

Obama's foreign trip offers benefits and risks aplenty. **page 2**

#### SCOTT RUSSELL

Tables are turned for recent visitors to food shelves. **page 3**

#### DAVID BRAUER

The Daily Glean: Pioneer Press chronicles pain in the asphalt. **page 5**

#### COMMUNITY VOICES

Green-collar jobs can help grow a sustainable economy. **page 6**

## MINNPOST.WORLD

# Obama's foreign trip offers benefits and risks aplenty

By SHARON SCHMICKLE

Sen. Barack Obama's foreign tour dominated the news on Sunday, but it had started in security-driven shadows that were at odds with the look-at-me nature of a presidential campaign.

Because the Illinois Democrat's trip is one part congressional policy tour, much about the itinerary remained secret until the travelers were beyond major danger zones. Sens. Jack Reed, D-R.I., and Chuck Hagel, R-Neb., are with him.

But it also is many parts campaign swing by the Democrats' presumed presidential nominee. And as such, the secrecy is awkward.

Those disparate missions incorporated in Obama's trip highlight the delicate balance he is trying to maintain in this crucial phase of his campaign.

## One president at a time

Obama needs the tour to overcome his lack of military and deep foreign-policy experience. He is making something close to a presidential tour — meeting with heads of state in Afghanistan, Iraq, Jordan, Israel, France, Britain and Germany. Yet, of course, he is not the president. To presume in advance that he will win the role could be political suicide.

In policy terms, the trip's main value is the experience Obama will gain. The military commanders must be guarded in anything they say as long as they answer to their current commander in chief. As heads of state graciously receive him, they cannot engage as if he were president.

Indeed, Obama stressed as he left the United States on Thursday that he had no intention of lecturing Afghan President Hamid Karzai and Iraqi Prime Minister Nouri al-Maliki on their future options should he take the Oval Office. He insisted that this was a listening tour and that he was going as a senator.

"We have one president at a time, so it's the president's job to deliver those messages," he told

reporters as he departed from the United States.

## Decisive test

Politically, though, the trip is Obama's "Ich bin ein Commander" test, Newsweek said.

"It may well be the decisive one of his candidacy, especially with so many media stars — including three network anchors — along for the ride," Newsweek said.

A major reason Sen. John McCain, the presumed Republican nominee, has managed to rise above the public's grim assessment of the Republican Party is that, for many voters, he has already passed this test, as a former Vietnam prisoner of war and a four-term senator.

Americans think by a two-to-one margin Obama would do more to improve the country's image abroad than McCain, according to a Washington Post-ABC News survey. But here's the catch: Only 48 percent said the Democrat would make a good commander in chief, compared to 72 percent for McCain. And McCain was judged as the one with greater knowledge of the world by more than 2 to 1.

"Despite survey numbers that consistently show Americans more concerned about the economy and domestic issues than Iraq and other international issues, the commander-in-chief test is often the decisive one when it's time to enter the voting booth," Newsweek said.

In other words, a brilliant foreign policy may not push Obama over the top. But a view that he would be a naive or weak leader in a dangerous world would almost surely cost him the election.

And, even though Obama's staunch opposition to the Iraq War helped him secure the nomination, McCain has hammered on the fact that Obama's only previous visit to that country was in January 2006. He had never been to Afghanistan before this trip.

In his Saturday radio address, McCain cast Obama's tour as an illustration of the Democrat's inexperience: "In a time of war, the commander-in-chief's job doesn't

get a learning curve," he said.

## Major risk

Because President Bush is unpopular around the world, Obama is likely to be warmly received, especially in Europe.

The BBC went so far as to predict "Obamamania will go global."

But any stumble along the way could prove disastrous with American voters.

"He could end up looking like an innocent abroad, which would produce precisely the opposite effect Obama is seeking," Newsweek said.

Already seen as a gaffe was an interest expressed by Obama's campaign to speak at the Brandenburg Gate near the site of the old Berlin Wall where Ronald Reagan famously lectured Soviet leader Mikhail Gorbachev in 1987 to "tear down this wall."

German Chancellor Angela Merkel discouraged the idea of Obama's speaking there, noting that this was principally a political, not a diplomatic, visit. And Obama's campaign said over the weekend that he will give a major speech on trans-Atlantic relations Thursday in front of the Siegesaule, a landmark victory column in a large park in central Berlin.

Another pitfall Obama must avoid is seeming to side with President Bush's many European critics, the Financial Times of London said in analysis of the Obama trip.

"He must not accept the acclaim of those who loathe President George W. Bush and all his works too eagerly," the Financial Times said. "Americans have a low opinion of their president, but do not always care to hear foreigners (some of whom might be anti-American, after all) express similar contempt."

Yet another pitfall lies in the intricacies of Middle East politics, Reuters said.

"Obama attracted attention in June when he told a pro-Israeli lobby group that Jerusalem must remain Israel's undivided capital — only to amend his stance the

next day to say the issue should be negotiated by all parties," Reuters said.

It would be very easy for Obama to misspeak in the Middle East. And it is certain that McCain and his campaign would pounce on any mistake.

Despite the risk, Obama "had to make this trip," the BBC concluded.

"With his major speeches on race and religion he has shown a tendency to directly address perceived weaknesses," the BBC said. "That is what he appears to be doing again."

However, the BBC noted, "Speeches are much easier to control, though, than week-long trips across the world."

## Kuwait, Afghanistan and Iraq

Obama's first stop was in Kuwait, where he played basketball with American troops.

Next, in Afghanistan, he received briefings from officials at Bagram Air Base near Kabul and at an American base in Jalalabad near the mountainous border with Pakistan, the International Herald Tribune reported. In Kabul on Sunday, he ate breakfast with American troops and lunch with President Karzai.

Obama used the setting to declare that Afghanistan must become "the central front" in the war on terror, thereby sharpening his policy clash with McCain over whether the war in Iraq has been a distraction from that effort, the Herald Tribune said. Obama has pledged to send thousands more troops to Afghanistan and to focus more on terrorist sanctuaries in Pakistan.

Today, Obama began what may be the trip's most crucial stop: a visit in Iraq. First, he stopped in the southern Shiite city Basra, where he visited soldiers and met with British, Iraqi and American officials, a military spokesman told the New York Times. The next stop on his schedule is Baghdad.

# Tables are turned for recent visitors to food shelves

By SCOTT RUSSELL

The Friends in Need Food Shelf is seeing a lot of middle-class families from St. Paul Park, Cottage Grove and Newport.

They're "people who say they have given to us for years, and now they are needing us," said director Michelle Rageth. "They have mortgages and car payments. We are seeing a lot of people who are not your typical food-shelf person."

Rageth was among about 100 people who attended last week's Hunger Solutions Minnesota's resource fair at St. Paul's Como Lakeside Pavilion. Food-shelf use is up 60 percent since 2000, organizers said.

Hunger Solutions gave MinnPost a table at the event, an opportunity for participants to come and talk, even pitch a story if they wanted. It was called media "speed dating." Rageth dropped off to tell her story.

By budget measures, her organization is tiny. It gets free rent and utilities from Marathon Petroleum. (It raised \$172,616 in 2006, according to state reports.)

Two Lions Club chapters have been big donors, but their donations have taken a recent hit. Rageth said the clubs lost some of their charitable gambling sites when restaurants and a bingo hall closed. Their donations dropped from around \$15,000 a year each to \$5,000 to \$6,000 apiece.

"Right now I am writing more grants than ever," Rageth said.

## Making adjustments

Business was slow at my back-corner table. More wall-flower than speed dater, I started wandering around looking for

interviews.

At the Second Harvest Heartland booth, Lori Johnson, director of programs, told me the food bank had begun a new outreach program, a stopgap to meet growing needs.

Second Harvest teams up with community organizations in underserved neighborhoods. The partner scouts out a location and drums up volunteers, and Second Harvest brings the food, trains volunteers and does the paperwork.

The food inventory is more limited than a typical food shelf. Second Harvest brings in the best of what's available, which includes items with a short shelf life and surplus.

"It may be breakfast cereal, crackers, pickles, laundry detergent, shampoo," Johnson said. It is not as nutritional as a food shelf, "but it is a way to bridge the gap until they can get to those other sources."

Loaves & Fishes Executive Director Dean Weigel said among his challenges was a menu balancing act, trying to make meals both tasty and nutritious.

Loaves & Fishes volunteers — religious, civic or business groups — serve 1,500 hot meals every weekday at eight metro locations after buying and preparing the food themselves. But two years ago, University of Minnesota nutrition experts analyzed meals and found them high in sugar, fat and calories.

Loaves & Fishes began encouraging healthier menus. Weigel recalled standing near the trash can at St. Paul's Dorothy Day Center one day when the meal included vegetable stew and yogurt.

"A ton of food got thrown away," he said. "We backed off in being tyrants about it and said, 'OK, let's mix it in. Let's bring in fresh fruits and fresh vegetables. Let's bring in raisins instead of chocolate chip cookies.'"

One bright spot on the horizon is an anticipated government commodities boost, said John Wollum, director of procurement and distribution for Hunger Solutions. (The state contracts with Hunger Solutions to distribute commodities to food shelves and other agencies.)

Minnesota should see, he said, a big increase in "bonus food" — commodities available because of crop surpluses or market conditions. The state expects to receive approximately 60 truckloads of bonus food late this year, up from the typical 15 truckloads.

At 40,000 pounds of food per truck, that adds up to an extra 1.8 million pounds of canned fruit, canned vegetables, pork patties and more. (A food-shelf visitor receives on average 25 pounds of food, so that's enough food for about 72,000 visits.)

## McGovern's idea to feed more kids worldwide

Former presidential candidate George McGovern of South Dakota, who spoke at a rally following the resource fair, plugged an international effort to feed more kids.

"If we had one month for the cost of the war in Iraq, we could run a worldwide school lunch program," he said. "And the world might be more peaceful. It might even have less terrorism in it than you can achieve by sending our army to complicated places like Iraq."

State Rep. John Benson, D-Minnetonka, also spoke. During a tough 2008 session, Benson carried a bill that increased state food-shelf funding by \$519,000. It wasn't the \$1.5 million he sought. Still, it was the first funding increase in about a dozen years.

In an interview, Benson said many legislators assume charitable organizations can handle the problem.

"This is way beyond their capacity," he said. "If we have to cut ethanol subsidies, or JOBZ, or something else ... to feed hungry children that is what ought to be done."

## Seeking summer food providers

Postscript for nonprofits seeking to feed more kids during the summer: Contact Jeanette Butcher, summer food service program coordinator for the Minnesota Department of Education.

Her program works with schools, parks or nonprofits during the summer to provide meals in areas where at least half the kids are eligible for free- or reduced-price lunches. This year, the program had 78 sponsors and 370 sites statewide. Still, it doesn't reach nearly the numbers served during the school year, and Butcher is looking for more partners next summer.

Congress simplified the rules this year. For every lunch served, sponsors get \$3.04 to help cover food and labor costs, Butcher said. She can be reached at 651-582-8543.

## MinnPost inPrint

MinnPost in Print includes highlights of MinnPost.com, a new daily providing high-quality journalism for people everywhere who care about Minnesota. MinnPost in Print is distributed at selected locations in the Twin

Cities, but anyone can print a copy from a PDF available at [www.minnpost.com](http://www.minnpost.com). Visit the website for audio, videos and more stories. We believe that high-quality journalism is not just a consumer good; it's a community asset

that contributes to the health of our democracy and the quality of our lives. Please consider making a donation to MinnPost, a nonprofit enterprise.

Joel Kramer, CEO and editor

# Monetary roadblocks lessen nuclear prospects

continued from page 1

DFL Sens. Steve Murphy of Red Wing and Jim Carlson of Eagan have joined DFL Reps. Tom Huntley of Duluth and Tim Mahoney of St. Paul in pushing to lift a 16-year-old nuclear ban in the state. Many Republican legislators, led by veteran Steve Dill of Dassel, have lined up for nuclear power.

Nationally, no nuclear plant has been built in 30 years because of safety concerns and the lack of a long promised federal waste-disposal facility for spent fuel rods that remain radioactive. About 20 percent of the nation's power comes from 104 aging nuclear generators; by contrast, Western Europe and Japan rely heavily on nuclear power (80 percent of France's power comes from nuclear), and China, Russia, and India have announced plans to build more than 100 nuclear plants.

## McCain seeks 45 new generators by 2030

McCain has advocated building 45 new nuclear generators in the U.S. by 2030, which is a lightning-fast pace for an energy form that takes years just to plan and site, and to gain approval from federal regulators who are supersensitive to nuclear safety concerns.

Edward Garvey, director of the Minnesota Office of Energy Security and the Pawlenty administration's point person on energy, said that nuclear power should be in the mix of available energy sources.

"We believe that nuclear power plays an important place in Minnesota's current reliable, low-cost and environmentally superior resource mix," Garvey said. "It should not be dismissed out of hand."

No Minnesota utility is considering a nuclear plant, and a report by Moody's Investment Service may explain why. In a nutshell, building costs have become prohibitive.

"There are risks to adding new nuclear generation capacity for public power utilities that could potentially affect credit," Moody's said.

"These include potential for construction cost overruns; negative public reaction to potential safety and security problems at nuclear plants, lack of experience with new plant designs, and a lack of a long-term federal solution for storage of radioactive waste, thus leading to long-term cost uncertainty."

## 17 plants in various stages of planning

Of the 17 nuclear plants at various stages of being planned nationally, it's expected now that few if any will be built anytime soon – mainly because of the high construction costs.

Moody's report said the same construction-cost uncertainties facing nuclear plants are problematic for new coal plants. Costs for building materials like steel and concrete are increasing rapidly, significantly outpacing the standard 2.5 percent annual inflation rate.

But it's the magnitude of rising costs that has observers agog.

According to a report in one energy journal, Florida Power & Light told that state's Public Service Commission last year that the cost for building two new nuclear units could be \$8,000 per kilowatt (kw), more than twice the \$2,000 per kw that the industry estimated in 2005.

There are 1,000 kw in a megawatt (mw). Base-load nuclear plants like Xcel Energy's twin plants at Prairie Island near Red Wing and its Monticello reactor are each about 600 mw. Applying Florida Power's estimates to building those plants today would be \$8,000 x 1,000 x 6, or \$4.8 billion.

Fuel for nuclear costs about \$1 per kw hour, or half the equivalent cost of coal and an eighth the cost of natural gas.

Wind has zero fuel costs. The

cost of building generators is about \$2,000 per kw, and so the cost of building 600 megawatts of wind capacity would be about \$1.2 billion (compared with \$4.8 billion for nuclear).

The favorable cost for building wind turbines is not lost on the nation's utilities. Xcel Energy operates in 11 states and leads the nation in commercial wind-power generation with a building boom so strong in Minnesota that the utility and others are seeking to increase transmission capacity to carry all the wind power to the Twin Cities and other demand centers.

The cost factor also isn't lost on what may seem an unlikely investor: billionaire oilman T. Boone Pickens. Pickens recently announced that he'll build 2,700 turbines (figure \$5 million apiece) in the Texas Panhandle, and that would be the world's largest wind farm.

An advantage of nuclear, coal and gas-fired generating plants is that they operate at between 85 and 90 percent of rated capacity, shutting down only infrequently for maintenance. Wind turbines, however, operate at 30- to 40 percent of capacity because of vagaries of wind and wind speed.

In addition to Minnesota's moratorium on nuclear plants, the Legislature has mandated that a quarter of the state's electricity be produced by renewables by 2025. That means the state's present capacity of 1,000 mw of wind would have to increase sevenfold.

## Carbon-emissions reduction also mandated

The Legislature has also mandated sharp reductions in carbon emissions linked to climate change, which places pressure on utilities to justify building coal-fired plants. The controversial 550-mw coal plant proposed by Otter Tail Power of Fergus Falls, Minn., and five other utilities has drawn opposition because of its massive carbon emissions. The Minnesota Public Utilities Commission has a pending decision whether to issue

a "certificate of need" for transmission lines carrying power from the South Dakota border plant into Minnesota.

Free market, regulatory, and social costs are at the root of Moody's Investment Service's dour view of nuclear power, and even coal.

But what about the favorable budgetary item enjoyed by every energy sector – taxpayer-supported government subsidies?

The U.S. Government Accounting Office (GAO) issued a report last October that summarized subsidies for major electrical-production sectors; it said:

- Of \$11.5 billion in energy research support, nuclear power received \$6.2 billion, fossil fuels (coal and natural gas) received \$3.2 billion, and renewables (wind and solar) got \$1.4 billion.

- For direct subsidies over the same period, fossil fuels (coal and gas) received the lion's share at \$13.7 billion, renewables (wind and solar) got \$2.8 billion, and nuclear received nothing because a production tax credit for new facilities did not take effect since no new plants were built. However, nuclear plants did benefit from the Price-Anderson liability limitation The Price-Anderson Nuclear Industries Indemnity Act in the event of an accident, something that analysts say is worth hundreds of millions of dollars per year in saved insurance costs. (In fact, without he liability protection that was enacted in 1957, the nuclear power industry likely would not exist in the U.S.)

As they push nuclear power, neither McCain nor Pawlenty – nor other advocates, for that matter – discuss whether they would favor increasing government subsidies for the energy source. But without subsidy support, observers say it's unlikely that Wall Street financing will be readily available.

*Ron Way, a former reporter for several Midwest newspapers, covers the environment and energy issues. He can be reached at rway@minnpost.com.*

## THE DAILY GLEAN

## Pioneer Press chronicles pain in the asphalt

By DAVID BRAUER

The next materials-crisis frontier: asphalt. Prices for the high-grade stuff (yes, asphalt has grades) are up 40 percent, the PiPress's Jennifer BJORHUS writes. A shortage has affected MnDOT's push for high-quality paving, though it doesn't sound like projects have been stopped; a lower grade has been offered. Flint Hills Resources had to (legally) break contracts because it couldn't get a key raw material. Asphalt's waste-oil base price has doubled in six months, and refiners have switched to more profitable products.

Fox9's Tom Lyden looks at rude bus drivers. With the caveat the Metro Transit surveys show 90 percent satisfaction, Lyden homes in on the "other 10 percent" — diesel jockeys with, say, 100 or more complaints in six years. Onboard video is invaluable here, including a multiple f-bomb confrontation with a mom who, Lyden asserts, was right about her rights. (She later pled guilty to assaulting a police officer.) He notes that Metro Transit more often penalizes drivers who are late.

A big story for the local chattering class: Former Twin Cities Reader editor and current New York Timesman David Carr has a new tell-all about his coke-snorting, girlfriend-abusing and generally deprived Minneapolis days, and gets a lengthy warts-and-more-warts profile from the Washington Post media columnist Howard Kurtz. Expect a ton of local coverage any second now. (Disclaimer: I'm a

bit player in "Night of the Gun" and was treated fairly, perhaps even generously.)

Four local food-conglomerate poohbahs gather in Stribland for an interesting, if one-sided, chat about their inflation-impacted industry. The leaders of Cargill, General Mills, Lund's and CHS (formerly Cenex) decry foreign price controls as fertilizer costs soar; that will just reduce supply, they argue, even while acknowledging the globe is growing more calories than ever. Restricting free trade will also raise prices, they add. Ethanol subsidies are decried.

More food: General Mills' Ken Powell says his firm forecast sustained inflation three years ago; Greg Page says fertilizer has become an outsized part of Cargill's portfolio, but storing pricey grain mean cash flow is down even though earnings are up. (Cue world's smallest violin.) CHS' John Johnson says \$50 oil and \$2 corn ain't comin' back. On a slo-o-o-w news day, the piece should've been front page, but one wonders if industry watchdogs get a place at a subsequent roundtable.

Related: MPR's Dan Gunderson offers a nice ground-level check-in with a Minnesota farmer he's followed since February. The crop looks good, fertilizer and gas prices are killers, and who the heck knows when to sell the harvest?

Ouch: The two Minnesota stations that sold B-99 — 99 percent biodiesel — have stopped because prices would

be about \$5.70 a gallon. (One station's regular diesel is still a whopping \$4.84.) MPR's Tom Weber says high corn prices have torpedoed soybean planting, raising soybean prices and thus soy-derived biodiesel. Uh-oh: One station owner says the stuff also gummed up his filters last winter. Minnesota mandates 2 percent biodiesel in all diesel fuel; that goes up to 5 percent next year. Mistake?

Sharing and Caring Hands' Mary Jo Copeland has canceled her plans for a controversial "modern-day orphanage" in Eagan, the PiPress' Frederick Melo reports. Copeland couldn't raise the necessary \$30 million for the Gift of Mary home, and this week, Eagan's planning council will recommend re-zoning the land to agriculture. Melo notes the orphanage concept was rejected in Brooklyn Park and Chaska, and minority-group spokesfolk opposed it. A \$5 million gift from Best Buy's Richard Schulze was withdrawn, unmatched.

The Strib's James Walsh profiles Minnesota's new top federal judge, Michael Davis. Davis is the first black to lead the federal bench; the Clinton appointee is a veteran of Minneapolis' Legal Rights Center (former home of Congressman Keith Ellison). He gets praise as a calm presence who somehow persuaded fellow jurists to once give up vacations to clear a court backlog. By the way: He's also a veteran of the FISA court. The low-key Davis replaces the voluble James Rosenbaum.

A bunch of suburbs might

upgrade streetlight technology and save energy by bypassing Xcel, the Strib's Laurie Blake reports. The 31-city Suburban Rate Authority is using Eden Prairie as a template; that 'burb has bids from four private firms to install and maintain the lights; Xcel's bid isn't in yet. Everyone must still get their power from Xcel, but things like LED streetlights might slice electricity bills, too. Brooklyn Park is "weeks away" from an LED test install.

A Strib op-ed columnist complains about Red Bull advertising cubes being placed on the Stone Arch bridge's bike lanes, forcing cyclists to weave among pedestrians on the sidewalks. Next time, the Park Board should put cubes on, say, the parkway and see how drivers like it. After all, what's good for one set of commuters ...

They raced ostriches and camels at Canterbury Park Sunday. (Not against each other, though maybe next year.) KARE 11 has the video; the Strib's Tom Horgen has the dispatch.

Nort spews: Scott Baker threw a gem, but Twins batters did nothing and Minnesota lost 1-0 to Texas. They're still a half-game back of the Whites. Some dude named R.W. Eaks won the 3M Championship for older male golfers.

## Want to add your voice?

If you're interested in joining the discussion by writing a Community Voices article, email Susan Albright at [salbright@minnpost.com](mailto:salbright@minnpost.com).

## COMMUNITY VOICES

# Green-collar jobs can help grow a sustainable economy

By ERIN BOEKE BURKE

The tradition of apprenticeship – a craft master teaching trade skills to craft entrants – is one of the oldest and most effective methods of learning. That tradition continues in Minnesota today, and may be the key to growing a sustainable green-collar economy.

The state of Minnesota formalized the apprenticeship process and began registering apprentices in 1939, which has helped the state maintain a highly educated and skilled workforce, providing excellent services and making living wages. At present, there are more than 10,500 apprentices across Minnesota learning over 100 different occupations. In addition to three to five years of on-the-job training, apprentices also complete classroom training at union apprenticeship centers or one of the Minnesota State Colleges or Universities.

This ability to train a highly skilled workforce is needed more than ever. Massive layoffs and changing markets have contracted some sectors of the Minnesotan economy. Increasingly, green-collar industries are being explored as a potential source of future jobs that will pay living wages and revitalize the Minnesota economy. Our skilled workforce and abundance of natural resources, including wind and farmland, are two of the reasons the state is considered prime for developing the green-collar sector.

The “green-collar economy” is an emerging term, without a consensus definition. In its narrowest usage, the term describes research and manufacturing jobs related to alternative

energy technologies, including biofuels, solar panels, and wind turbines. The Minneapolis and St. Paul Mayors Initiative on Green Manufacturing targets green building and transportation product development (including insulation, landscape materials, fuel cells, and hybrid buses), in addition to renewable energy technologies. But the definition can be even broader.

## Continuous innovation

“When I hear green-collar jobs, I think of jobs that revolve around creating not just a sustainable economy but also sustainable communities and a business model that makes money,” said Tom Menke, co-founder of The Urban Project, a green building company. “I think all construction jobs can be considered a green-collar job, if you go about it in a specific way.” That way involves continuous innovation and redefining production within the framework of a “triple bottom line” of economy, environment, and local community.

If the green-collar economy is the future of economic development in Minnesota, what then do we need to do to prepare for it? Are our students and apprentices getting the education that a green-collar workforce will demand?

St. Paul College, which collaborates with many local unions to teach the classroom portion of apprenticeships, reports little change in the curricula for apprentices. It’s reflective of the fact that while the specific products may change, there has been little difference in the fundamental way that we manufacture goods, build houses, or distribute

electricity. The development of a green-collar economy so far is a simple process of adaptation, instead of revolution.

That said, several unions cited that they were closely watching the development of green construction and manufacturing to keep their programs current, and have already started providing hands-on training with new technologies.

“As electricians we try to stay ahead of the curve. ... I do think there’s going to be a lot more interest [in windmills and other green technologies] in the very near future with energy prices going up the way they are,” said Andy Toft, Apprentice Training Director for the South Central Minnesota Joint Apprenticeship and Training Committee for the Electrical Industry (SC MN JATC). Although demand is still small in much of rural Minnesota, the SC MN JATC added a section on alternative energies to their apprentice curriculum three years ago, and offers additional training on the cabling and work conditions in wind turbines. The Minneapolis Electrical JATC built the first certified solar PV training center.

## Building on the past for demands of the future

According to the Minnesota Department of Labor, “In all skilled occupations, employers are becoming greatly concerned about the shortage of job candidates with the necessary skills and abilities.” Apprenticeships are a means of growing a skilled and sustainable green-collar workforce by retaining knowledge from the past and adapting to the demands of the future.

But no matter how skilled the workforce is, we will not build a green-collar economy without demand and investment. The Mayors Initiative on Green Manufacturing in the Twin Cities is an excellent example of information as well as investment, and electricians in Rochester are volunteering their time to install solar panels on schools in Rochester to raise awareness.

For Menke, the biggest difference between construction and green construction for builders as well as consumers is the emphasis on creativity and a constant drive to do something better, for the community and environment as well as economically. “More than anything, it’s breaking habit. Getting out of the status quo.”

Minnesota has a prime opportunity to break the status quo and move forward. Investing in Minnesota’s future requires forward-thinking public policy that seamlessly integrates new technology with skilled craft tradition. Green-collar jobs can anchor Minnesota’s next trades generation, providing skilled, unionized workers with high-quality, high-paying jobs. Minnesota will be better and richer for it.

*Erin Boeke Burke is a graduate research fellow at Minnesota 2020, a progressive, nonpartisan think tank based in St. Paul.*