

# ON THE EDGE OF THE *economic* NEW FRONTIER

Ross Alumni Seek Fortune in the Emerging Carbon Economy

By Terry Kosdrosky



One of the biggest buzz phrases generated by President Barack Obama's administration is "green jobs." The new president wants U.S. business to lead the world in tackling global climate change.

But what, exactly, are those jobs, especially for the business school graduate? There's no easy answer, since policy is still developing. Most signs point to some sort of cap-and-trade system, where a limit is set on emissions, and companies are allowed to buy and sell rights (or credits) to emit carbon.

Ross alumni already are sensing opportunities in this new "carbon economy." Their skills are in demand whether they are being asked to analyze the carbon trading markets, create forestry-based carbon credits, or secure contracts for renewable landfill gas.

Nothing is a sure bet right now, which makes some of these nascent fields risky. But that's what also makes them thrilling, says Justin Felt, MBA/MS '08. He received his dual degree from Ross and the School of Natural Resources and Environment (SNRE) via the Frederick A. and Barbara M. Erb Institute for Global Sustainable Enterprise.

"You have to be comfortable with a level of risk and change, and that's what's exciting," Felt says. The multidisciplinary

approach at Ross prepared him for a role that intersects science, business, and government. "I like finance, but this is such a complicated marketplace: It involves finance, science, and policy."

**ANALYZING THE NEW MARKET** Felt's job is a prime example of a traditional position — market analyst — getting a twist in the new economy. He works for Point Carbon, a firm of 220 employees that was founded in 2000 to provide research and analytics on the carbon and energy markets. Felt is based in the North American office and manages Point Carbon's one-stop shop for research and market data on the carbon offset markets in the U.S. and Canada.

What makes it more interesting than the average market analyst job is that the U.S. carbon trading system is voluntary. Carbon financial instruments, or CFIs, are traded on the Chicago Climate Exchange and over the counter. Many companies are starting to purchase offsets in anticipation of a mandatory cap-and-trade system.

With the market still voluntary, there are a number of measures used to value carbon credits. The goal is to stay one step ahead and help clients demystify the market while making sound financial decisions. Much of Felt's work revolves around



› JUSTIN FELT, MBA/MS '08, analyzes carbon energy markets.

**GABRIEL THOUMI, MBA/MS '08,**  
on a job site in Australia, is director  
of forestry for MGM International.



providing information on where regulation will go, and then translating that to forecasts and analytics.

“It’s more of a ‘Wild West’ right now,” Felt says. “You have a very Balkanized market. It’s not really clear what this is going to look like a year from now. So the key for us is to always be reading the market and be a step ahead of everyone. There are a lot of players jumping into this field, so it’s exciting and there’s a lot of investment. There’s a very good chance we will be living in a carbon-constrained world in North America, and we’re helping companies prepare for it.”

As the son of a Foreign Service officer, Felt grew up with an interest in international policy. His career, though, was centered in corporate finance. While at Ross, he discovered he could meld his business expertise with his affinity for the environment and public policy.

“It’s great because I was reading about this [environmental] stuff in my free time, so when I was looking to go to graduate school, I was really looking at environmental finance,” he says.

Even with the economic crisis occupying much of the new administration’s time, Felt believes there will be movement toward regulated carbon emissions around 2010 to 2015. “A lot of things get put to the side when people start losing their jobs,

but President Obama has made it clear that it will be a priority,” he says.

**SEEING THE FOREST FOR THE TREES** Gabriel Thoumi, MBA/MS’08, has a varied background in finance and real estate with three graduate degrees. Like Felt, he received his dual degree from Ross and SNRE through the Erb Institute. Living in Indonesia and seeing deforestation up close helped set him on his current career path as director of forestry at MGM International. The project development firm helps companies evaluate and create carbon credits.

“I saw the fires at night when I was in Indonesia,” he says. “And it just hits you. I couldn’t do anything else. I tried for years to do something different. But I live and breathe this now, and I love it.”

Thoumi leads a team that works with industry, developers, and property owners to preserve forests or grow new trees for reforestation. In return, these companies are able to manufacture carbon credits, which can be sold.

Quantifying and valuing the carbon credits for such transactions is a complicated process. Some countries follow rules established by the Kyoto Protocols while others, like the U.S., do not. In North America, there’s a patchwork of regional initiatives since the carbon credits market is still voluntary.

“The two words that dominate the industry right now are exaggeration and confusion,” Thoumi says. “So as 2008 was the year of registry and third-party certification mechanisms, 2009 will be the year of verifying credits. In the last four months, we have verified at MGM almost two million metric tons of carbon dioxide equivalent from forestry projects.”

The way Thoumi sees it, his main skill is evaluating complex systems. The forest is a complex system, he notes, as are the regulatory and financial hoops one must jump through in the emerging offset market. After studying strategy with Ross professors **Allan Afuah** and **Linda Lim**, Thoumi developed a model called rational convergence that he uses as a guide to chop through the complexity.

“You have these four circles — science, civil society, government, and business — and where they intersect is the action of the project,” he says.

In Thoumi’s model, science means that the land dictates the rules. Forests are complex, changing systems. Civil society means

“... the 21st century is going to be the century of natural capital.”

— GABRIEL THOUMI, MBA/MS '08

that the local population has to buy in and be a gatekeeper for any project. Governments dispense rights, and the rules are different in every country. And, finally, business means structuring the risks.

That model helped Thoumi and some colleagues work on a project that ultimately saved 225,000 hectares, or 600,000 acres, of Indonesian forest that were home to a sizable orangutan population. What began as a long shot became a reality after developing land surveys, working with the local residents and Indonesia’s forestry ministry, and helping a land owner build a business case.

“I think the 21st century is going to be the century of natural capital,” Thoumi says. “For the previous 500 years, we’ve been going overseas looking for markets. Now I’m looking for natural resources, not to exploit them, but to maintain and restore them to their natural state. There’s more value in maintaining them on a per-hectare basis than there is in exploiting them.”

He also sees his business as a growth industry, despite the poor economy.

“I’m bullish,” Thoumi says. “Since I’ve started, I’ve hired one person, and we may hire more. But it’s hard, because from a skill-set point of view, this is difficult to teach. People have to have a science background and a business background. They also have to be entrepreneurs.”

**IT’S A GAS** In the years since graduating from Ross, **Tara D’Andrea**, BBA ’95, followed a traditional path for a Detroit. She worked at a few automotive parts suppliers and then GMAC, the financing arm of General Motors Corp. But by 2005, she wanted to re-invent her career.

When an opportunity opened at DTE Biomass Energy, D’Andrea

went for it. The company, a subsidiary of utility DTE Energy Co., captures gas produced from landfills and uses it to generate renewable electricity. It also processes and transports product to industrial clients to offset fossil fuel use.

DTE Biomass is hardly a latecomer to the scene. It’s been doing this for about 20 years. But there’s heightened attention now as more companies look to energy alternatives and become more conscious about their carbon footprint. More states also are mandating the use of renewable fuels. The federal government may do the same.

“There’s a lot more attention on the renewable character of our product,” D’Andrea says. “But it’s a double-edged sword because that’s going to attract more entrants to the market. We’ve been doing it for more than 20 years, so obviously we’ve been doing something right.”

And these new entrants might not appreciate how tricky the business can be. The start-up costs are high, the development process is long, and the economies of scale are small. A medium-sized landfill

can generate about five megawatts of power, though few go over 10. A traditional coal plant can produce 2,000 megawatts.

There’s also the issue of reaching the end user. Many landfills are “in the middle of nowhere,” so D’Andrea has to come up with a cost-effective way to transfer the energy to the customer. The job also requires negotiating gas-use rights with landfill owners and drawing up 20-year contracts with customers.

With those conditions, pricing the deal incorrectly can be disastrous.

“If you think the market price is going to be \$120 per megawatt and it’s really \$90, you’ve missed the market by a lot,” she says. “So you have to manage the downside but make sure you don’t miss the upside.”

Fortunately, D’Andrea acquired extensive transaction experience in the auto industry. For her, it’s about taking that ability to make the correct market assessment from a pile of data and translating it to a new and different business. With the economic downturn worsening and people nervous about their jobs, she recommends people investigate careers they’ve never considered.

“People say the economy is so bad, and it is. But look around. There are opportunities out there,” D’Andrea says. “I’ve always been a ‘greenie,’ but I never thought I’d be doing this as a career. One of the reasons I do this is because I look at my kids and don’t want to leave them an Earth that’s a burning ash. And I’m lucky I found one of the places I can do something about that.” ✨



› **TARA D’ANDREA**, BBA ’95, negotiates gas-use rights with landfill owners for DTE Biomass Energy.