

NEW LAWS FOR ENERGY PRODUCTION AND CONSERVATION SET THE FUTURE PATH

limate leaders long have been developing systems that draw clean and sustainable energy from the sun, wind, and waterways. A 2019 New York State law, intending to address climate change and reach net-zero emissions, is accelerating those efforts with rigorous targets, beginning in 2025.

The initiatives that will emerge from the law will sweep across individuals, business, and industry as anyone who builds, rehabs, or owns a building will have to accept new practices and energy sources to turn on the lights and set the thermostat.

The region's leaders gathered to discuss the opportunities and challenges posed by New York's Climate Leadership and Community Protection Act and other issues affecting their industries during a recent Panel of Experts event hosted by Business First of Buffalo.

Panelists were:

- Michael Barbasch, energy and commissioning discipline leader, LaBella Associates DPC.
- James Dentinger, president, Noco Enterprises Co. LLC
- David Flynn, partner, energy, environment and nanotechnology practice teams leader, Phillips Lytle LLP
- Gary Marchiori, president, EnergyMark LLC
- Daniel Montante, president, Montante Solar
- Melanie Stachowiak, partner, M/E Engineering P.C.

The depth and breadth of the Climate Act took everyone by surprise when it became law two years ago, Flynn said.

"Everybody sat back and said, 'What is this and how in God's name do we implement it because it literally touches every aspect of human life in New York State," Flynn said. "So how do you wrap your head and hands around that and pull it together?"

The answer might be in the scoping plan that is being written by the New York Climate Action

Council. It will lay out and prioritize at a high level the different pieces of the act that are going to be implemented over the coming generations, Flynn said. Some of those are significant in terms of electrifying buildings and getting fossil fuel-driven vehicles off the road, he said. The scoping

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"We're seeing these evaluations in 50% to 60% energy reduction for these buildings."

- Melanie Stachowiak, partner, M/E Engineering P.C.





MICHAEL BARBASCH Senior Energy Engineer LaBella

Mike is a Senior Energy Engineer with over 16 years of experience in demand side energy efficiency strategies. He obtained a Bachelor's of Science in Electrical Engineering from the University at Buffalo, and is a Certified Energy Manager, Certified Building Commissioning Professional, and a LEED Accredited Professional. His primary focus includes energy efficiency auditing and developing innovative solutions for various facility types. He has provided project preliminary assessments, utility bill analysis, detailed energy calculations, investment grade audits and cost estimates, engineering design support and project management services. Mike has helped clients realize significant savings through energy grants and incentives as well as energy cost reductions and operational improvements.





JAMES F. DENTINGER

President

NOCO Enterprises LLC

Jim Dentinger is President of NOCO Enterprises LLC, a division of NOCO that is responsible for facilitating the company's growth. As NOCO builds upon its reputation as a sustainable, future-focused, and innovative company, Jim's oversight includes new market opportunities, product development, and strategic acquisitions.

Before joining NOCO, Jim co-founded the creation of McGuire Development. His visionary leadership, depth of real estate experience, and commitment to business ethics played a major role in the firm's expansion. Jim now serves as McGuire Development's Director of Asset Management.

As a lifelong Buffalonian, Jim has a passion for Western New York and the development of our community. He is the vice chairman of the ECMC Lifeline Foundation; board member of the Amherst Police Foundation; member of the Executive Board Shea's Board of Trustees; past president of the Buffalo Renaissance Foundation; former chairman of the Buffalo Urban League; former vice chairman and current member of Employers Supporting the Guard and Reserve (ESGR); past president of the Leadership Buffalo board of directors; former board member for the Canisius College Board of Regents; a former member of the Buffalo State College Foundation, Leadership Buffalo Class of





Partner
Phillips Lytle LLP

David P. Flynn is a Partner at Phillips Lytle LLP and Co-Leader of the Firm's Energy Practice Team. Mr. Flynn advises clients on business development issues and the regulation of energy before state and federal authorities. He advises clients on the development and siting of renewable energy, merchant power generating facilities, licensing of hydropower projects, and drafting and negotiating Payment in Lieu of Taxes (PILOT) agreements associated with solar and wind projects and related advice regarding the New York Real Property Tax Law 487 tax exemption. He has strong connections with major energy and energy-related organizations.





GARY MARCHIORI

President

EnergyMark

Gary Marchiori is the President of EnergyMark, a licensed Natural Gas and Power supply company.

He has been involved in all aspects of the Natural Gas Business since 1985. He is a Board Member of the Independent Oil and Gas Association of New York and long

term energy entrepreneur.

His past experience includes positions as Vice President, NorthEast Region of Constellation NewEnergy; Managing Partner, NOCO Energy Marketing; and Regional Marketing Director of Texaco Natural Gas Inc.

A resident of WNY since 1983, Gary and his wife Patricia, live in Williamsville, NY.

His community involvement includes membership in 11 area Chambers of Commerce, including Niagara USA Chamber and Niagara County organizations including the Kenan Center, and the Buffalo Niagara Manufacturing Alliance.





President
Montante Solar

Daniel Montante is President and co-founder of Montante Solar. A veteran of the renewable energy industry, Mr. Montante has overseen the company's rapid growth, solidifying its position as a key player in the New York solar market. Mr. Montante has assembled a top tier team of

engineering, construction and finance professionals that have built some of the most noteworthy solar projects in New York. His strong managerial and financial modeling skills have played a large role in the company's success.

Mr. Montante holds a Bachelor of Science in Business Administration from Skidmore College and a Master of Business Administration from Wake Forest University. He is Board Treasurer of the New York Solar Energy Industries Association (NYSEIA), and serves on the Board of Directors at Artpark & Company Inc. and the Arts Services initiative of Western New York.





MELANIE G. STACHOWIAK, P.E., LEED AP BD+C, CMVP Partner M/E Engineering

Melanie has over 17 years' experience in the mechanical engineering field and a strong background in sustainability, energy reduction, emerging technologies and efficiency improvement projects. She has

specialized expertise in energy modeling, energy assessments, and net zero projects. She also manages energy conservation related design projects primarily for the college/university and commercial markets. Her impressive portfolio includes clients such as Cornell University, SUCF, NYSERDA, and various SUNY schools. Melanie's genuine interest in the environment has helped to shape a successful career path, and she continually seeks collaborative and creative solutions to establishing a more sustainable future for NYS.



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plan is expected to be completed later this year.

The council is a 22-member committee representing utilities, academia, advocacy groups, energy providers, environmental groups, and New York state government. Business does not have a seat at the table, Flynn noted.

"It's important for the business community to make sure their voices are heard in this process," Flynn said. "Nobody is really

and financial struggle meeting the projects cannot be built in 40% of the territory served by Rochester Electric & Gas and New York State Electric & Gas because the transmission lines cannot handle the additional voltage, he said. That blocks an enormous portion of the state's geography from any requires plowing hundreds of millions of dollars to upgrade the transmission system just in that

goals of the law. For example, solar region.

solar initiative. Fixing the situation o poor project planning in the past that has

standing back and saving these are great ideas but what are they going to cost and how do we pay for them. There will be horrific sticker shock as these things start to roll out."

Some building modernization and efficiency requirements are "almost incomprehensible," Flynn said, in terms of how impactful and costly they are going to be to the costs of construction.

"Let's remember this is not a national act, this is New York State," Flynn said. "So, if you don't want to pay an extra 50 bucks a foot for a building for high energy efficiency you can go to 49 other states and not have to deal with all that. So, it's important for the business community to be heard in the process."

The state has "moonshot aspirations" with what is expected to be achieve by 2050, Montante said. He predicts a practical

"You just can't build a solar project, plug it into the transmission lines and you're good to go," Montante said.

"There is an enormous amount of existing infrastructure issues that need to be overcome and the price tag to do that is not entirely clear yet. It's safe to say you're in the billions and billions of dollars to achieve that."

Add other related elements, such as energy storage systems that will consistently and evenly emit power, and the price increases, Stachowiak

Businesses should be cognizant that their efforts toward reducing energy use could be attractive to future workforces, Dentinger said. The young person coming into the workforce now has grown up with environmental consciousness and expects to work for a company that is focused on sustainability and energy use, he said.

Western New York employers

"Why not embrace something that is good for the world and good Jim Dentinger, president, Noco Enterprises Co. LLC

could experience this particularly as it recruits young workers to its growing technology hub.

"Those are the workers really attracted to places that have a strong focus on the environment as a core principle," Dentinger said. "So, it's important that my generation understands that dynamic. That generation has grown up very quickly and their expectation is different than was ours was 20 or 30 years ago. It's important that Buffalo is a leader in this. If the Climate Act is done properly, it could be strategic to Western New York."

Solar energy, once a focus of energy alternatives, has become vilified lately. There are reasons for what drives such perception from the public, Montante said. Existing projects have unattractive views from the street in general and for

those mega-large, 25-megawat t and up projects, in rural communities in particular, the concept of home rule and home permitting has gone away.

"That whole authority has been stripped from local municipalities and now resides in

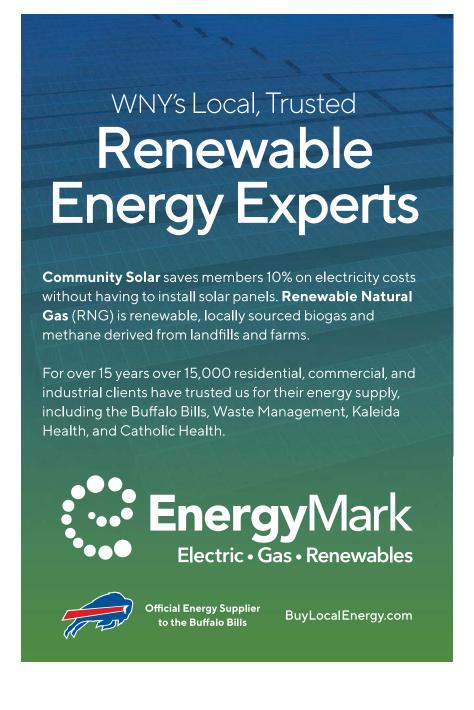
"It has the potential to transform the economy and allow New York to be a leader in that space." David Flynn, partner, energy, environment and nanotechnology practice teams leader, Phillips Lytle LLP

Albany, and there's a lot of push back. There's a lot of resentment directed at Albany but it's hitting the entire industry," he said.

There also are many falsehoods about solar projects that are contributing to the general beliefs, including that they are noisy and will leave a brownfield in their wake, he said.

"What needs to be focused on are some of the great rationales to embrace solar," Montante said.

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ENERGY

Electric & Gas
Transmission and Distribution
Hydrogeneration
Renewables
Program Management
Construction Management



ENVIRONMENTAL

Environmental Remediation &
Compliance
Full Service Solid Waste
Air Permitting
Environmental Contracting
Pipeline Recycling



BUILDINGS

Architecture
Interior Design
Mechanical, Electrical,
Plumbing Engineering
Structural Engineering
Site Development
Hazardous Building Materials



INFRASTRUCTURE

Transportation Engineering Municipal Engineering Construction Engineering Planning & Grant Writing Surveying

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"Number one, from a municipality's perspective, this provides a great tax base. A project developed on a 20-acre site will bring in property taxes and not demand any services from the community."

He said residential rooftop solar is "very healthy" and predicts robust markets in low- and moderate-income housing and solar projects sited on former industrial or brownfield sites. The positive forecast is supported by grid parity, the cost of generating solar electricity is equal or less than that of traditional grid electricity, having been reached in several areas of the state.

Another positive: such projects provide high-paying construction jobs, and area residents will be able to buy lower-cost power that they can get from the grid, Montante added

"If you break down the economics, these projects make clear sense," Montante said. "It all comes down to poor project planning in the past that has put a black eye on the industry."

Increasing solar power, however, is the Climate Act's first goal.
The state wants to achieve 6,000 megawatts of solar power by 2025.

There are less than 500 completed megawatts now, making the state's target aggressive, Marchiori said.

Meeting that target could be especially challenging, given the community opposition to current projects, Marchiori said. In addition to the home rule issue, there are 22 agency-approval levels to siting a solar field. The 25-acre community solar projects preferably are located on brownfields, which can be controversial. Getting approvals can be difficult, but Marchiori predicts that ultimately there will be hundreds of those across the state. Siting the 1,000-acre utilityscale solar projects will be difficult for many of the same reasons.

Marchiori said that the total square miles needed to reach the state's goals equals half the landmass of Erie County.

"Their contribution to the grid is part of this move to renewables but the barriers are the agencies' ability to handle the scale of this right now given the requirements of permitting, studies, and so on," Marchiori said. "Subsidies are less now. As solar has developed, the subsidies have decreased somewhat so the economics of that are also less attractive today than they



were two years ago."

Perhaps not surprisingly, hydropower, which is 23% of the state's electric generation source, is in Western New York, he said. Downstate uses natural gas and oil, making Western New York considerably greener.

Customers have not focused on how energy is produced, they just want it to be produced and they want it to be cost effective as they transition from traditional fossil fuel, Dentinger said.

One of the biggest challenges is cutting through the myriad of information sent to homes by competing marketers so that the consumer ultimately truly

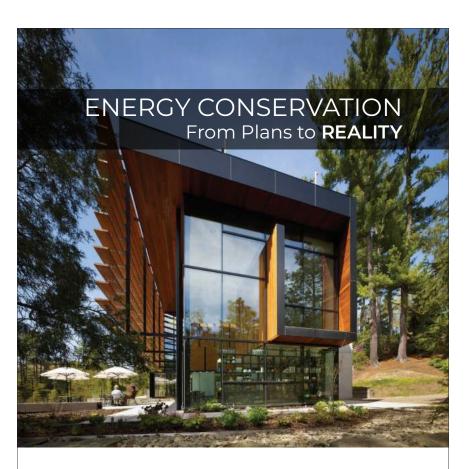
understands and accepts the benefits for both them and the environment.

"Why not embrace something that is good for the world and good for the economy?" Dentinger said. "It really starts with a grassroots approach. You can save some money and find more costeffective ways to bring energy into your home."

Engineering firms, meanwhile, are attempting to address the Climate Act's aggressive goals in a number of ways, Stachowiak said.

Their work involves diving into the energy use of a building and

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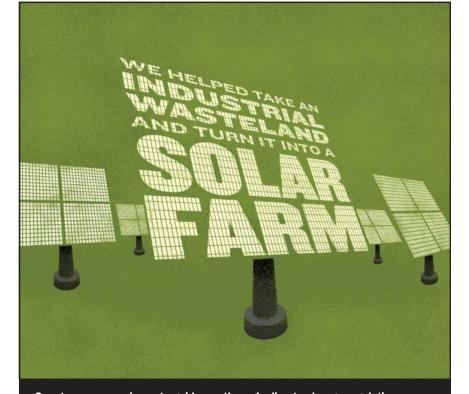


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looking at energy conservation measures and preliminary feasibility studies and analyses, Stachowiak said. Measures are evaluated from costs, maintenance, and the life cycle of the equipment and then the measures are stacked to see how they are working together and whether the building's energy use can be minimized, she said.

Different technologies, such as geothermal and solar power systems, are then evaluated.

"We're seeing these evaluations in 50% to 60% energy reduction for these buildings," Stachowiak said. "When you do 100% renewables, now you're talking about a net-zero building."

It takes a motivated building owner or developer to engage these systems and technologies, however, Barbasch said.

Typically, when a developer wants a building here to do that, the engineering firm and architect hired are obligated to meet the building and energy codes required by the state. It doesn't require them to review with the owner form and cost of alternatives, he said.

"There is that one extra step," Barbasch said. "The motivated

building owner or developer would have to really seek out that analysis. The funding programs through the New York State Energy Research and Development Authority would in some cases pay for all of that or most of evaluate opportunities to reduce energy costs and incorporate clean energy into capital planning.

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"It's a good opportunity for existing building owners to contemplate the renovation to make sure they're embarking on the right decision, not just based on first costs but on the lifecycle cost of the system"

- Michael Barbasch, energy and commissioning discipline leader, LaBella Associates, DPC.

those efforts, whether it's a new construction, a gut-rehab or even an existing building where they are contemplating a renovation. The state has been good at funding those programs."

Barbasch mentioned NYSERDA's Flexible Technical Assistance Program that offers up to 100% of the costs of an energy study of a building that will help identify and the right decision, not just based on first costs but on the lifecycle cost of the system," Barbasch said. "You have to get out of the mindset of not the best boiler out there but the best system to heat or cool the building."

Stachowiak said developers and building owners have become more receptive to the alternative energy systems, but in the end, it comes down to cost.

"You don't find many business owners who what to be proactive," Dentinger said. "We have to be in front of that discussion."

Flynn predicted that aggressive energy saving and waste reduction initiatives by the state will increase the cost of doing business and create disincentives to rehab buildings and expand economically in New York.

At the same time, the initiatives will create business and job opportunities, such as in energy storage, that haven't been available in the region until recently, he said. In a positive development, after the results

of the national elections in November, inquiries came into Phillips Lytle from investors from outside the state, Europe and the Far East who are interested in pursuing renewable energy projects in New York because of the receptive and supportive market, Flynn said.

"That's the glass half-full view," Flynn said. "It has the potential to transform the economy and allow New York to be a leader in that space. The transition, I'm concerned, is going to take a long time and could be painful if it isn't managed appropriately."

