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# Industry ROUNDTABLE

# ENERGY AND INFRASTRUCTURE

PRESENTED BY:



**Hodgson Russ**  
ATTORNEYS LLP

**H**ow does poor infrastructure increase your cost of doing business? What would it take to modernize New York's infrastructure? How do you see the future of renewable energy in New York state? Law firm Hodgson Russ and the *Albany Business Review* hosted a discussion to answer these questions and more. Cindy Applebaum, market president and publisher of the *Albany Business Review*, moderated the discussion.



## ▶ MEET THE PANEL



**CARM BASILE**  
Title: CEO  
Company: CDTA



**CHRISTOPHER CANADA**  
Title: Partner  
Company: Hodgson Russ, LLP



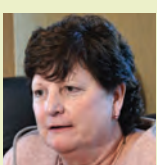
**MARK CASTIGLIONE**  
Title: Executive Director  
Company: Capital District Regional Planning Commission



**DOREEN HARRIS**  
Title: Director of Large Scale Renewables  
Company: NYSERDA



**RICHARD HENDRICK**  
Title: General Manager  
Company: Port of Albany



**LAURIE POLTYNSKI**  
Title: Regional Executive, Eastern New York  
Company: National Grid



**How does poor infrastructure hurt your business or cap your business growth?**

**RICHARD HENDRICK:** If the rail infrastructure and the bridges can't handle cargo coming to us, we have one other asset that we can use: the canals to bring by water. But just trying to get these pieces over roadways is very trying. We're in the process now of a \$50 million upgrade to our infrastructure at the Port of Albany.

Since 2008, we've put in just about a whole new wharf at the port and raised it to 1,200 pounds of support per square foot. I recently met with people who said that in order to handle the offshore components, we're probably going to need between 5,00 and 6,000 pounds per square foot. So, while we're proud of what we built, we're now finding we're five times less capacity than what is needed for the future.

**CARM BASILE:** Right now, we're hearing that Congress and the president are looking for something they can agree on. And we're hearing they can agree on infrastructure. We need to talk about what that is. It's roads, it's highways, it's bridges, it's ports, it's transit systems and it's everything that lies underneath that to support it. Better roads that are good for us are good for all of you who use your automobiles. And when we talk about infrastructure, we don't want to compete with every form of mobility. We want to make all mobility better. Our roads are deteriorating. Our bridges are deteriorating. It's not a pretty picture and we need to address it now.



**How does it affect the bus routes on the roads?**

**BASILE:** We are part of the infrastructure. And we're not doing enough. There should be more transit. The community is saying, "We want more," and they want it quicker than we can provide it. We share the same roads that all of you do, and they're not good. Our

vehicles deteriorate quicker than they should.



**How does that increase your cost of doing business?**

**BASILE:** It increases our maintenance cost. The pothole situation is really bad. The cost of fuel is an issue. But we're in favor of raising the gas tax as a way to fund infrastructure. We want a higher gas tax and now we're all going to pay a higher cost per gallon, but I think it's well worth it. If you look at studies, most Americans approve of an increase, whether it's the federal gas tax or a state gas tax. It's high time we start defining what we'll do with that money to make infrastructure better.

**MARK CASTIGLIONE:** It's also important to recognize that there's a hidden cost in not maintaining the infrastructure from a regional basis. All the hours lost sitting in traffic, all the hours lost dealing with or being confronted with failure of infrastructure in our communities, translates to a negative economic impact in our region. And that's compounded by aging infrastructure across our region, because every piece of aging infrastructure is the next potential failure. And that failure is the next potential negative impact to our economy.

**LAURIE POLTYNSKI:** When prospects come to our area to grow their business, for them, infrastructure is not only the roads, ports and airport. It's gas, electricity, water, sewer. It's all part of the definition of infrastructure and it's really important for our entire area of economic growth to have that.

**CHRIS CANADA:** A big part of my practice is representing industrial development agencies, with the idea being that businesses come to speak of financial systems with a sales tax exemption. The IDAs are trying to get economic development off the ground, but sewer, water and electric infrastructure must be in place so these businesses can come in and hit the ground run-



Standing: Carm Basile, left, Rich Hendrick, Christopher Canada, Mark Castiglione. Seated: Doreen Harris, left, and Laurie Poltynski.

DONNA ABBOTT-VLAHOS

ning. We've had some success in creating industrial parks, where that infrastructure is in place.

**CASTIGLIONE:** We work with six cities and two counties on a municipal project to abate combined sewer flow contamination on the Hudson River. It's a model that we are going to need to emulate because some of our issues relate to stormwater and sewage. We really need to work together municipally as a region. Most of our infrastructure is hidden and not really on the top of mind oftentimes, but it's the thing that can wreak the most havoc in communities and the thing that prevents businesses from locating in the community.

It's important to understand that the Northeast, in general, is going to experience a 71% increase in extreme rain events over the next decades. How we plan to accommodate that and be more resilient as communities is going to be critically important. We need to work together to implement a cocktail of approaches, from green infrastructure to hardening of our shorelines to investing in our sewer infrastructure to building more treatment plants. It's going to take a joint effort across our region, municipalities and all levels of government.



**What kind of money and resources would it take to modernize New York's infrastructure?**

**DOREEN HARRIS:** NYSERDA focuses on the energy aspects of infrastructure. When one speaks of energy and infrastructure, we think about things like transmission and port access. Energy projects need these types of infrastructure to be successful to deliver. That's what's necessary to meet those demands. So, when we as a state are thinking about planning for energy development of a scale that we are considering, and advancing in a very aggressive way, we think about the needs for those pre-conditions to be available.

Specific to the world in which I sit, we look a lot at land-based renewable projects, which very much need access to transmission in order to deliver to those centers. As we look forward, it's really exciting to see some

of these more significant transmission projects being advanced. Offshore wind is a really interesting resource that has, in my view, contributions from an economic and environmental perspective that make it really interesting to think about when coupled with these infrastructure needs that are inherent to it. We think about transmission both on land and in the ocean, which is a whole new interesting challenge for us to consider, as well as advancement of our port infrastructure.

Earlier this year, in fact, in a State of the State address, Gov. Cuomo further committed \$200 million for port infrastructure advancement because we know that's a really important part of advancing this resource, as well as additional advancement and development of transmission infrastructure for offshore wind.

**HENDRICK:** We had an independent study done of what it would cost the port to ready the new land that we purchased in our expansion for offshore wind. It was estimated at \$180 million just to ready it with all the water, sewer, electric, gas and ground infrastructure. Everything above the ground wasn't even included in that. That's just \$180 million for an 80-acre parcel in upstate. I couldn't even put enough zeroes on what it would take to improve the infrastructure all across New York.

**CASTIGLIONE:** The governor has made some investments, but the question is always, who pays? For water infrastructure, our current investment is around \$200 million, but the need is \$1 billion a year. That's a huge gap. The Environment Facilities Corporation is making more money available to local governments for that work. But so much more needs to be done to prepare for resiliency for storm events coming in the future.



**How much of a disadvantage are we at compared to states whose infrastructure is newer? Do we lose business? Are we seeing companies migrate out to take advantage of newer infrastructure?**

**CANADA:** Businesses that can't get financial assistance

because the infrastructure is not there will go to other states. It's definitely a concern.

**BASILE:** It's a double-edge sword because we have a historic kind of infrastructure. We have the walkable communities and the authentic dense downtowns, which other areas that have new infrastructure don't have. They're building auto-dependent unsustainable communities. We have old infrastructure, yes, but we have a fundamental design of our community in a region that allows us to be more sustainable if we make the investments that we need to fix and maintain what we have here. I don't think it's entirely a disadvantage to not have new infrastructure. But I think it is a disadvantage if we don't invest in fixing what we have.

**POLTYNSKI:** It's never just one thing that companies are looking at for economic development. They want the quality of life as well. Some of the electric poles out there are 70 to 100 years old. In upstate New York, we've spent \$6 billion in the last 10 years, and we're investing another \$3 billion, so we are investing in the infrastructure. On the gas side, we have cast iron pipes. In most of our major cities, we're replacing 90 miles a year. It's a long process, but it's underway.

**HARRIS:** As someone who works in this space from multiple angles, I see it as an opportunity. When one thinks about the governor's proposal of a Green New Deal, that's what we're trying to get to. As a state, we have a fundamental precondition for this to happen because of the investments that our past generations made. But in the end, what we look forward to doing is utilizing that infrastructure, the foundation that has been built, for our brand-new economy.

The principles of the Green New Deal are intended to bring forth clean energy but also jobs and infrastructure to support it, using those foundational elements. The other thing that's really exciting about it for me is that it's not just state money or federal money that's being considered. It's private capital that's coming into this market to couple these investments. People are looking

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at New York as an opportunity because of the pre-conditions and because of the investments that we're committing to.

**POLTYNSKI:** As a company, we're investing in clean energy, technologies, offshore wind, hooking up more solar. I think we've done 15,000 solar array projects in upstate New York in the last couple of years. But we can't lose sight of the fact that the math doesn't work yet for us to get rid of gas and the technologies that some of our large industrial customers still need. You can't put in geothermal or electric heat pumps and run a paper mill or run a chip fab. So, we call it an all-of-the-above-approach cocktail. It has to be a mixture of everything.



#### How do you see the future of renewable energy in New York state?

**HARRIS:** The Green New Deal is the principle upon which all of this is based, which is really launching New York to the forefront with regard to the pursuit of clean energy and 100% carbon-free electricity by 2040. We are looking to achieve this by rapid advancement of renewable energy. The governor proposed an expansion to the Clean Energy Standard earlier this year to 70% renewables by 2030. That really what was brought about by the penetration of additional large-scale renewable, big infrastructure projects to bear onto New York's electricity grid.

In the last two years alone, New York state has awarded contracts for 46 different large-scale renewable projects. That's unprecedented. That's more than we would have done even in the prior 10 years, probably. It's an incredible ramp-up of renewables and the benefits that come within them, because of them.

**HENDRICK:** I see the port being a major player in the continuance of the building of the onshore wind we're looking at. We believe that the offshore industry is going to be so big that nobody is big enough to handle it themselves. It's going to be a major benefit to our entire region. For years now we've talked about regional benefits and the ideas that outside the box you can use my toys. We have to continue that and work together so that everybody in the entire region will benefit from this new push for offshore wind.

They're talking about having towers in the bed of the ocean in 2021. We need to build on our workforce development to have people ready to work in that industry so that we don't miss a step. It's going to be moving so fast. It's not a job that somebody could just start today and work this. There's a lot of training involved. If you can picture some of the blades that are coming for onshore wind now, the engineering and technology are developing the blade in two pieces so that we can more easily transport them.

That generation is supposed to be coming through the port in the third and fourth quarter this year. Bumper-to-bumper on a truck, it's going to be 238 feet. Getting through communities, turning corners with the back of a truck being 238 feet behind the front, is a big problem. The blade is longer than a football field. We're behind in the training that's going to be needed in the workforce to prepare for this industry

**CASTIGLIONE:** We need market-based incentives and grant incentives to accelerate the adoption of these technologies. But from a local perspective, change only happens as fast as communities and people are willing to accept it. We're working with NYSERDA on ways to get local governments to adopt some of these clean air technologies. We're looking at playing the long game

at the regional planning commission, at being a broker and working with local governments and helping them make the transition to clean energy.



#### What are the challenges to decarbonizing the industrial economy? Is it even possible? And can it be done without wrecking the state's economy?

**POLTYNSKI:** There's lots of new technology for the residential sector. But for us in upstate New York, and particularly here in the eastern division, we have major manufacturing firms for which there is no technology yet for creating the steam that creates the power that creates the jobs for the paper companies, the semiconductor, the SUNY system and all those major employers. Hopefully someday there will be a technology for that. But today there's not, and without MetroGas they can't run their facilities. So, where will people work if we can't run those processes?



#### Are you worried about New York's access to natural gas?

**POLTYNSKI:** Yes. We are trying to build the seven-mile project in the Capital Region that serves the entire gas infrastructure from the Capital Region, north. It's our pipeline E-37 Reliability and Resiliency Project, and we're currently in Article Seven with the PSC. The hope for that project is to close the horseshoe we have in this area so we can actually move gas around. We had public statement hearings last week and not a lot of people were for the project. We have folks that don't want to see any more natural gas. But to the last point: Without any natural gas where will people work and how would we keep those manufacturing jobs?

## Committed to the Energy Industry



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**POLTYNSKI:** We're working on 13 projects now throughout New York state where we would create gas from sewage. We're working on a farm project in Kinderhook where we would take farm waste and create natural gas from the farm waste. We do currently still have a need, but those will take creativity. We don't have enough cows in upstate to replace what's coming in on the pipelines. The math isn't there yet.

**BASILE:** We still don't do very well in taking a regional approach to any of these issues. We quickly drift into, "Not in my backyard. I know it's really good for the rest of the region, but if it's going to cut through my backyard, touch my backyard ... If I even feel like it's in my backyard, I'm against it."

If it's good for all of us, it has to be something that we rally around. In a lot of ways the most needed commodity here is a regional wake-up call.

**CASTIGLIONE:** What really makes it difficult for communities to work together on a regional basis isn't that they don't want to. The filter that is applied when municipal projects go to the state for funding, or have to work with agencies on permitting, still perpetuates the square peg in a round hole.

New York is the only state in the nation with a state-mandated environmental review without any requirements for state-level requirements for planning at the local level. There's a tremendous disconnect between what happens when you seek a process and what a community might do in terms of planning and evaluation. When we think about economic development and investing in infrastructure, we should be looking at a regional level. But all these decisions are really being made at the local level. They're all being made in a disconnected and uncoordinated way.

There has been tremendous investment in municipal funding to incentivize the process. But until we take a look at some of these barriers and have some state incentives for communities to plan together more effectively in the upfront investment in determining what they want and where they want it, particularly in advance when they seek a project review, we're not going to move the needle on incentivizing communities to work together.

**HARRIS:** These are large, complicated projects and the people that are responsible for thinking about what is best for their community do have a lot on their plate. These folks are working part time. One of the communities I met with, the town supervisor is working for \$7,500 a year and he's hosting a 90-megawatt wind farm.

There's a need for a trusted partner in that process, and some of the trusted partners are your solar communities – people who have been through it, who understand what they've dealt with and can help you understand what you might need to explore as these projects advance. As a state, we're trying to think about it from all angles because it's complicated and you can't solve it with just one approach.

From a regional perspective, a lot of these resources have a natural application to multi-state efforts. Offshore wind is a very good example of that. The Port Authority of New York and New Jersey is a really good example of an entity that is in a position to think about regional collaboration with regard to port infrastructure and other activities. There's a need for dozens of port authorities and dozens of operations, and that's what we're thinking about. It's how to most optimally build that supply chain regionally as a result.

**How important is the Port of Albany for the manufacturing industry and the economy?**

**HENDRICK:** The title of our TIGER grant application was Exporting New York. We are a transportation hub for the manufacturers in upstate New York. We have a company



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in Morrisville that is exporting generators on a smaller basis, and we can reach the rest of the world in a number of weeks for anything that leaves the Port of Albany. The same goes for manufacturers that need the raw goods. We have several wood pulp customers that are importing from Northern Europe and we're giving them their feedstock for their continued operations.

The port has existed since 1932 as a world shipping point, and I don't think the Capital Region really understands the value that the port affords to the region. If you had to take any of your goods and ship them to New York to be put on the water to go around the world, you're tripling your cost because it's being handled so many different times.

**What if the Port of Albany gets a chunk of the emerging offshore wind industry, what kinds of jobs would it bring to the region?**

**HENDRICK:** The bolts that connect the hub of the tower to the blade could all be manufactured locally. There would be jobs for the machinists to turn a bolt, for the truckers to transport it, for the longshoremen to put it onto that barge or ship to bring it to the site. We're looking at long-term jobs over at least 30 to 40 years. A couple of generations of workers would be involved in this. Once they're built they still have a high dependency on repair and maintenance.

We need to train people for these jobs and now is the time to start. The industry itself is talking thousands of jobs, not just like when we do a construction job and we say we're going to have 60 people with the work building this one structure. The chain of employment is in the thousands for this industry.

**What infrastructure is this region lacking that affects CDTA?**

**BASILE:** We would like to see a tremendous improvement in the road and bridge network throughout the region, and I'm not just talking interstates. Our cities and towns are strapped for money to do what is needed to do. We talk about all the jobs that might come to the region. Well, what do people want when they come to a region? It's that whole quality of life issue. We really need to think seriously about roads and bridges in our region and ways to make them 21st century. Right now we're barely 20th century.



**What are the challenges in electric buses?**

**BASILE:** We're going to find out really soon. We're the first upstate system to have them. We'll have them mid- to late-summer. The electric propulsion industry is very mature. But there are a lot of moving parts and a lot of things could go wrong. Our maintenance department should be successful very, very quickly. The cost of an electric bus versus a traditional twin-diesel bus is almost double the price. Right now it's \$450,000 for a standard vehicle that we purchase and it's \$900,000 for an electric.

We have a proposal right now to totally electrify the River Corridor so that when it debuts it's all electric buses. We will also test remote or on-site charging stations. We're willing to be the guinea pig for everybody in the region, but it's a little different than just plugging your car in. A full charge for us is probably going to be four to six hours. The grid has issues with it as well, because we're a little different. We're going to be consuming a lot of power, so we're working with them as to when that power consumption should take place. The manufacturer is claiming 200 miles on a full charge, but there are other variables to consider. On a cold day in January, for instance, how much does that range change?



**As CDTA transitions and you find more electric cars on the road, how do your resources for electrical power match up?**

**HARRIS:** We're working with them to make sure they have enough. But we are also working on an electric vehicle (EV) program because the range issue is a concern for car owners, too. As far as cars go, it's really exciting. Last year alone, more than 16,000 EVs were sold here in New York. That's a huge increase of 70% over the prior year. If you look at it nationwide, it's the same phenomenon. The charging infrastructure gap is an interesting challenge and there are a lot of people working on that challenge across the state. Through Charge New York, which is NYSERDA's partnership with NYPA and DEC, we've installed over 3,000 charging stations thus far and are aiming for 10,000 to be installed by 2021. It's what you need to address this issue and it's completely achievable.