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ECONOMIC DEVELOPMENT-LAND USE & HOUSING

January 5, 2022

MINUTES

Mr. Freddy Perez, Jr., Chairperson said good evening everyone and welcome to the Economic Development-Land Use & Housing Committee meeting for Wednesday, January 5th and I'm Freddy Perez the Chair of this Committee. Committee members have you had a chance to look at today's Agenda and if you have, do you have any questions. Everyone has a copy of the Agenda. So, I want to take a roll call to see whom is here and who's not from the Board for attendance purposes and will know whose here and who's not.

The roll was called.

Chairperson Mr. Freddy Perez, Jr. called for a motion for approval of the Agenda.

Motion made to approve the Agenda as presented. Motion duly seconded. Motion called and carried.

Chairperson Freddy Perez, Jr. said that today we're going to be hearing a presentation by NYSERDA the New York State Energy Research and Development Authority who issued an RFP and some presenters two, Champlain Hudson Power Express and Clean Path New York. This meeting is to hear each presenter's plan to supply and/or deliver renewable energy to the region but specifically it's going to be making its way through Community Board One. So, in September of 2021 Gov Hochul announced to recommend a contract award, one to Clean Path New York and one to Champlain Hudson Power Express. These projects were for the delivery of wind solar and hydro power to New York State. So, that would create a modern transmission system capable of responsibly delivering an increased amount of renewable electricity to downstate New York. NYSERDA will submit the recommended contract award to the New York Public Service Commission for review, public comment and approval. At this point I would ask

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that each organization make its presentation and in consideration of time no questions will be asked by Boardmembers until the last presentation is made. At that time, I will open up the floor for questions by Boardmembers and members when you're acknowledged please indicate your name and tell me which organization you're addressing for questions. I will acknowledge all Boardmembers so, they can vet the presenters properly. I ask that you keep your questions to tow so that you give other members time to do the same. It may be that another member has the same question as you but ask. So, this will save us a lot of time as well as getting the right answers. At the end we will again ask any final questions that you will have so you'll have a second opportunity to ask any questions or make any comments as this time. That being said, is the representative from NYSERDA here.

Mr. Eric Scherer, NYSERDA said good evening Mr. Freddy Perez. Hello, everyone it's a pleasure to have the opportunity to present to you tonight. Again, my name is Eric Scherer I'm from NYSERDA where I am the Program Lead on the Tier 4 Program, and if the term Tier 4 doesn't mean anything to you yet that's why I'm starting this presentation so, let me start by pulling up some slides, I hope everybody will be able to see the slides and I will certainly do my best to make sure I cover everything in what I'm about to say. So, my role here on behalf of NYSERDA is to set the scene and provide some introductory context on the overall Tier 4 Program. Again, I'll explain what Tier 4 means noting as was stated earlier that we will also be having presentations specifically from the two projects in question following my own presentation. So those presentations will go into more detail as we present the project. So, lets start here with the context for our discussion tonight which is New York States efforts in respect of fighting climate change and cleaning up electricity systems and so those effort have led fairly recently to a number of clean energy goals set out I legislation in 2019 and for our discussion tonight in particular relevant articles to achieve 70 percent renewable energy by 2030 as well as a fully clean electricity system with zero emissions by 2040.

So, what led to the program that we're discussing tonight again, called Tier 4 is that the Public Service Commission last year noted in its order at that time that in order to achieve these goals in particular the zero emissions, that of course means we have to have zero emissions everywhere and if I can draw your attention to the graphic on the right and for those on the phone, I'll describe it. That graphic shows the distinction in our electricity system between upstate and downstate. So, there's a lot of detail in that graphic which I'm going to ignore, and I will draw your attention to the outer rings there. So, if you look at the upstate ring on the left you can see the outer ring there shown in green, indicates that upstate we are really quite far along in our objective of cleaning up the electricity system, but on the right-hand side for downstate including therefore New York City the opposite is shown where the grid is mostly

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powered by fossil fuels and so, that's the challenge we're addressing here. Again, in order to achieve these goals of 70 percent and to effect, certainly an entirely clean electricity system we also need to clean up the system downstate. The Public Service Commission noted that in order to achieve that some of you may also be aware we have ambitious undertakings underway in developing offshore wind, off the coast of New York State. But the Public Service Commission noted that we can't solely rely on those efforts so, Tier 4 was established by the Public Service Commission as the program to overcome in particular this in balance between the upstate and the downstate. It's often referred to us as a tale of two grids and so the objective of Tier 4 is to turn it into one grid. I also note that I keep mentioning Tier 4 so, just for completeness of this note that's an indication that there are a number of other programs all combined under the umbrella of what we call the Clean Energy Standard Programs onshore wind and solar and indeed the off shore program that I just mentioned and so Tier 4 is the latest arrival in that suite of initiatives and so with that context in mind what Tier 4 does specifically is again aimed at cleaning up the grid downstate and in particular in New York City. What Tier 4 mandated is that projects could bid into Tier 4 by providing a combination of new transmission and renewable generation and so the context there that it's unlikely to be feasible certainly within New York City to develop large scale wind and solar farms and so the expectation was that the objective there what needs to be was to bring renewable electricity from elsewhere in particular from upstate New York into New York City and therefore we need more transmission to make that possible and so that's what Tier 4 does. It enables a combination of both more renewable electricity but also new transmission into zone J which is New York City.

Tier 4 allows the range of resources all renewable electricity resources, but it excludes offshore wind because there's a separate program for that and it's also note worthy that it allows for hydro power to be included under certain conditions. So, then following the Commissions order late last year to go ahead with this new Tier Program the task was given to NYSERDA to organize that program by means of an (RFP) A Request for Proposals basically a bidding process that allows projects to compete for contracts under Tier 4, so, that's the role that NYSERDA Tier 4 Program fulfills. It was setup and the contracts recently awarded to the selected projects and those contracts are effectively a vehicle to make these projects financially viable. I'm sure you're all familiar that in order to bring forward the power New York State provides these sorts of contracts that effectively act as a subsidy mechanism to provide the necessary amount of funding that projects need to be viable, and that same concept has been applied to Tier 4 as well. So, I also make that statement on the nature of Tier 4 because I think it will be useful for our conversation tonight, being conscious that the role of Tier 4 Program is a limited one. It's a process as I said is to make the necessary levels of funding available to these projects. It's not a process by which NYSERDA or the State effectively takes over these projects. So, these projects are still developed by the private sector, of course we will hear from developers later tonight

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and therefore, these projects still need to comply and go through all the relevant processes that pertain to projects of this nature including permitting procedures. So, just to make you aware of the role of Tier 4 Program is an important one, but it's also a limited one in order to get these projects developed so, that's the overall context of what Tier 4 is. I'll get into a little bit of more detail on how we conduct the selection process for the two projects. I will try to stay away from too much detail here, but just to give you a little bit of an insight into how the evaluation took place and mainly to emphasize that we put in place a range of evaluation criteria to make sure that we robustly assess the bids that we received and make sure that rate payers get the best projects out of this selection process. So, with that objective in mind you will see at the top of the bullets here, of course this won't surprise you, price is clearly a key evaluation criteria to make sure that rate payers get the best value so, price and therefore looking for the lowest price bids from the bidders accounted for 70 percent of the overall evaluation but then important criteria were also applied to non-price factors in particular 20 percent of the overall score was an assessment of how valuable the proposals are that we receive because after all it doesn't make sense to select the project even if it has the best possible price that then ultimately it's not feasible in terms of being actually developed and also 10 percent of the overall score was based on an assessment of economic benefits. Again, as part of the effort to make sure New York and New York rate payers see real benefits coming out of these projects. Then again, particularly the viability assessment there were a number of sub-criteria to assess all possible aspects of these projects including the experience level of the bidders, their plans for going forward with these projects, but also factors such as permitting and within the economic benefits. Again, a number of sub-categories were covered including the extent which economic benefits will be available to disadvantaged communities. So, following that extensive evaluation process we selected the two projects in September and then following a process of final contract negotiations we entered into contracts with these two projects and submitted them for the Commissions approval in November. So, again that was on the process now let's talk about the actual projects and I'll be brief here because we will hear more from the projects themselves. But as you already heard earlier the two projects are Clean Path New York and Champlain Hudson Power Express and again, I can be fairly brief here because Freddy already mentioned some of the key points on those projects here a combination of solar wind and hydro power and of course the aspect that I mentioned earlier that they include new transmission. Will I'll focus your attention to the points toward the bottom of the slide here, these projects indeed bring very significant benefits and contributions towards the goals that I mentioned earlier reducing the fossil fuel used in New York City very considerably indeed more than 80 percent by 2030 if we look together at the contributions that Tier 4 projects and off-shore wind will make in this respect. But also, very significant financial benefits 7.4 billion in overall benefits to society which includes more importantly of local health benefits as a result of air quality improvements that will accrue primarily in New York City as well as what I mentioned earlier economic development benefits more than 8 billion of those as well. The

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projects do come at a cost as well as I mentioned earlier the Tier 4 contracts are the means by which we make these projects financially viable, and we project that the costs of these projects it's just over 2 dollars a month for the average residential customer to pay. So, those are some of the key points to bear in mind.

At this time just going into a little more detail on what I summarized just how regarding economic and societal benefits so, briefly to point out some of those points to note again more than 8 billion in overall 8 billion in overall economic benefits which includes approximately 10 thousand new jobs and included in the economic benefits is also specifically that the projects are setting up Community Benefits Funds for a combined total of 460 million and as I mentioned earlier, we look at the broader societal benefits the more than 7 billion that I quoted earlier that includes a very significant chunk of the up to 4 billion which is the qualification of the benefits in air quality improvement so reduced fossilization, mortality and those kinds of health benefits and of course finally to remind ourselves that the overall objective of all of these programs is to fight climate change and to reduce carbon emissions and the significant contribution that these projects will make in that regard. So I'd like to keep it more or less at that for my introduction here just to briefly note as was done at the beginning of the session as well that there is an ongoing process following our submission of contracts to the Commission as currently ongoing process where stakeholders can submit comments that's open until the 7th of February at that point the Public Service Commission will consider the comments and issue its order to take a decision on the two projects that we've submitted to the Commission and if approved then those projects will go ahead and pursue the construction, development including the permitting process that they still have to go through. So, again I'll leave it at that, Freddy I noted that you want to keep Q & A until the end of the session, so at that point let me hand the floor back to you.

Mr. Freddy Perez, Jr. said thank you for making that presentation. We're going to hear now from, is there anyone here from Champlain Hudson Power Express.

Mr. Don Jessome, President & CEO Champlain Hudson Power Express said yes, and I will be giving the presentation on CHPE. First, of all thank you so much for giving us the opportunity this evening to brief you on our projects we've certainly been at this project for a long time and look forward to walking you through this evening on the benefits of this project. So let me give you a little background on the Champlain Hudson Power Express project it's a 1250-megawatt project, put that in perspective and its enough power to supply just several million homes residential homes so it's a significant amount of energy that's going to be coming in on this project and the power supply is going to be coming from Hydro Quebec. Hydro Quebec is predominately hydro, but they also do have wind generation as well in the province of Quebec,

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they have close to 40,000 megawatts of supply in the province of Quebec. We will be delivering 10.4 kilowatt hours a year of clean energy where 339 miles approximately 60 percent of that is in waterways and 40 percent is underground. So, we just take you down the pathway of our project. So, if we connect to the Hydro Quebec system at around Russel's Point right at the border of Lake Champlain and this is an all-buried transmission project so just everyone understands it's two cables approximately the size of my fist that will be carrying this electricity and it will be all buried. The only time you will see this cable is when it's actually being shipped over in preparation for installation. We go down Lake Champlain for about 100 miles and then in the southern part of Lake Champlain we jump out of the waterway and go on to primarily the Canadian Pacific Railroad right of way and so this is a pretty historic railroad right of way and we run along-side on sort of the outer edge of the railroad right of way. At the Sunkirk Railroad Yard just in the Albany District we switch over to the CSX right of way so again staying primarily on railroads rights of way. We come down the CSX we then go into the Hudson River and it's pretty much a straight shot right into Astoria and will talk a little bit more on how we come into the city in just a few minutes. The only exception to that is we come out of the Hudson River for about 7 miles in Rockland County where we will be putting cables in 9W, the reason we come out of the waterway there is there is a bank called Haverstraw Bank which is a particularly important spotting area for endangered species not the least of which is sturgeon, so we just avoided that entire area completely and gone on roadways in that area. So again, will talk a little bit more about how we come into the city and particularly the sector in Community Board One where we come into the Bronx.

So, our Business Model is what is called a Merchants Transmission Project as opposed to the traditional transmission that is to keep the lights on this is a transmission that's designed specifically to bring clean energy into the city so it's a little different from that perspective so we have what is called a Negotiated Rate Authority for approval so that's the federal approval that allows us to go out and seek customers and so we have partnered with Hydro Quebec. Hydro Quebec will be the one who will be utilizing our transmission service and they will be the ones delivering the clean energy and the recs under the NYSERDA contract. Like most communities in New York State, we have about 1.7 billion dollars in new tax revenue over the first 30 years of the project and that's going to be benefiting 72 municipalities and 59 school districts regulatory and community support. We have all of our major permits so the State Siting Permit which is probably the most important one from our perspective that is the Article 7 we have that permit now and that allows us to construct the CHPE Project. We have a Presidential Permit which is required because we crossed an international border between the US and Canada, and an Army Core of Engineers Permits those are primarily for the water ways that we traverse but it's also with respect to any wetlands that there's any impact. So, we have widespread support, environmental groups, unions, businesses, most communities, we have very strong local support, we have 36 municipalities passing resolutions in support for the project so, we've been up and down this pathway for many, many years and have been working

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with all of the different communities as we designed this project. This project is going to be primarily about producing CO2 which is obviously an incredibly important environmental impact, that is having a global impact, but it's also going to have very local impacts way in the communities of Brooklyn and Queens and Manhattan where we're going to be reducing local air pollutants because we will be displacing the traditional fossil generation, you've got New York City which is primarily fossil generation and that's overtime going to be replaced by clean energy including the hydro power from CHPE. Our job story we have over 1,400 jobs over the 4 and a half years of construction of the project and that has secondary benefits, another 3,000 additional secondary jobs associated with the project. This helps with the aging grid in New York State makes it much more resilient, more reliable as climate change related events occur. Labor support and job creation as I had mentioned we have 1,400 jobs during the construction. We have been working with unions for many, many years and they have been very strong supporters of our projects and recently have been writing into the PFC under the docket that's probably open, to approve these contracts showing support for our projects because of our strong labor commitment to this project. So, on the environmental social justice side as I had mentioned we're connecting into Astoria, Queens which is traditionally where it's been mostly thermal generation actually where our converter station is so, our transmission is slightly different then the transmission that Con Ed would have. So, Con Ed would use AC Service which is what actually runs all the equipment in your home we use DC technology primarily we use DC because it's extremely efficient in putting in cable format. So, the losses on-line are less than 5 percent over that long distance that we're going to be traversing we're able to use DC technology probably close to 40 percent or even higher so, DC has a lot of benefits in terms of being able to be very efficient in cable format from the loss perspective, but you have to convert it back to AC so that it can connect into the grid and be used in the homes. So, we built a converter station in Astoria and that's actually the piece of land that we will be building it on it's a piece of land we purchased it had on and it and I think still has today oil tanks that are going to be taken down and those oil tanks use to feed fossil generation. So, this is a clear indication of the grid and the fact that we're going to be physically removing all fossil generation assets and installing a converter station which will allow the power to be converted from DC to AC and then interconnected to the broader Con Ed system. We've also looked at you know some of the pollutants, the very local pollutants that would be reduced because of our project so our economists have looked at the nobs and sobs and particular matter and these are all very, very localized in terms of health facts and cleaner air and you know to put it into perspective our economists tell us the amounts of reduction in these local pollutants it's equivalent to removing 15 of the 16 peaking plants that are currently in and around New York City so fairly significant amounts of local pollutants that are going to be reduced because of this project.

I'm going to talk a little bit about a fund that we created which is called our Green Economy Fund, but we also have another fund which is 117-million-dollar Environmental Trust Fund, and

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this was set up during our Article 7 process when we were siting the project and this is going to be used over the life of the project to study the waterways, so we have both Lake Champlain, the Hudson River, Harlem and East River and the City of New York is one of the Board Members on our Trust Fund, so they have a view of what's going and so those funds are going to be used to study the waterways and help make those waterways better than when we first found them. Let me talk a little bit more about our Green Economy Fund, the Green Economy Fund is a 40-million-dollar fund that's co-sponsored between TTI, our company and Hydro Quebec it's going to be used to help create job training that can lead to good paying and organized labor jobs in the New York Green Economy with existing programs that we partnered with. We developed a close consultation with local workforce development experts, labor unions, housing authorities, community based organizations, civic groups, environmental NGO's and academics to serve the needs of the communities along the entire route with a focus on the underserved communities and it's going to focus on funding relevant programs and proposals from established Green Job Training Programs and be accessible to residents living in disadvantaged and underserved communities as well as workers transitioning from the fossil fuel industry. So, the idea here is that the construction of this project is going to be 4 years and we're going to be in these communities for much longer than that, this project is going to have a life span of over 60 years. So, we want to be able to help these communities and that will be here for many, many years by setting up this fund and establishing this Green Economy Fund to help train the new workers who are going to help all of us with the transition from the fossil generation that we have today to by 2040 having 100 percent clean energy on the grid.

So, we talked a little bit specifically about our path into the city so, the map here shows us coming down the Harlem River so if you see the rock down side you would see 3.30 and that is what we call via post 3.30 for our project of a full 339 miles and you'll see two lines a black line and a purple line so the black line was our original path that we had approved back in 2013 with the Public Service Commission and the purple line is what was approved in 2021. So, let me just tell you a little bit the difference between the two, so originally when we were looking and this was back in 2013 when we had this approved we were in the Harlem River Yards and at that point in time we had a path that we could go and bring our project and connect it over to the Astoria complex to connect it to the Con Ed grid, subsequent to that there has been a lot of infrastructure that has been built in the Harlem River Yards not the least of which there are many new underground feeders by Consolidated Edison. So, our Engineers looked at how we could avoid the Harlem River Yards as much as possible so that we could avoid all that new infrastructure so the new purple line here is what was approved by the Public Service Commission in 2021. So, in the Harlem River Yards we're now in the Harlem River Yards over 1,500 hundred ft. and previous, to that we were just over a mile in the Harlem River Yards, so that's the little sliver that we will be in, in the Bronx. We then go over to Randall's Island and then again just to be very clear this is all underground, so this is buried in the infrastructure. It

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goes to Randall's Island where it will be underneath Randall's Island and then going back into the East River and then over into the Astoria Complex. This is a little more detail just so you can see the barrier that we are going to be running our cable underneath the Harlem River Yards. So, the yellow line is the actual cable, and the hashed yellow line that is the actual leased area that we will be working with our partners in the Waste Management who are in negotiations to finalize that lease agreement. A little bit about the technology as I mentioned this is HDPC technology it's very safe, reliable this has been around for many, many years of technology. The cables as you can see in the picture are 5 inches you can fit those in your hand, those cables are solid state no one's put any liquids in these cables they're made up of copper, steel and what's called polyether line which if anybody has a white cutting board that's pretty much what that is. Also in terms of the cables themselves the converter station which converts from DC to AC that will be built at the Astoria Complex it provides both active power which runs all the appliances in your home but it also supplies other services primarily used by Con Ed including reactive power and what's called black star capability so one of the benefits of this project is hopefully this never happens again but if the grid actually does go down in the city you need to have technology called black star technology that can restart the grid and hydro power is ideal for black star capability. So that's one of the added benefits of the project. Generally, speaking when we're upland the cables are buried approximately 5 ft. underground in conduits which protects the cables so, the PBC are the conduits that prevent damage to the cables. This installation technique was closely coordinated by all, of the right of way owners that we have been working with, OGS, DOT, Municipalities, Department of Transport, New York City Parks and the installation impacts are deemed minimal by state federal agencies because of the technology that we have chosen. With that I will hand the speaker over to the next speaker.

Mr. Freddy Perez, Jr. said thank you sir. We're moving along and will hear from Clean Path New York.

Mr. Luke Falk, Vice President EnergyRE said thank you very much for hosting us tonight it's a real privilege to present our project to Community Board, we really value your feedback and insight and want to hear what you think about what we're trying to do. So, let me share my screen.

So, thanks again. Our project is called Clean Path New York, I'm not going to spend too much time or any talking about the NYSERDA process and the competitive solicitation under which we were awarded the opportunity to develop a project given Eric's previous remarks in setting up the contacts. But I did want to talk about the development team advancing the project and

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this is when I'll give Shashank and Josh an opportunity to introduce themselves and the organizations that they're with.

But EnergyRe is the entity with which I am associated it's a clean energy development company started by the principals of a real estate related companies that has done a lot of work in New York City and across the country. We are able, to leverage our expertise in complex and infrastructure development, architecture and engineering and associated matters to bring a benefit to the partnership here. So, Shashank do you want to talk about Invenergy.

Mr. Shashank Sane, Executive Vice President Transmission Development, Invenergy said thanks Luke and thanks to the Board for having us this evening, I'm excited to be here. Invenergy is one of the largest privately owned developers of renewable energy in the country. We're actively developing wind and solar battery storage and transmission across the country and in fact across the world. We've been in business for 20 years now we're celebrating our 20th anniversary and during that time we've developed over 27 thousand megawatts of renewable energy globally. More importantly though we've been in New York for quite a while for over 15 years now having built our first wind facility in New York State in 2007 and since that time we have also built additional wind projects, solar projects and excited to be a part of this Clean Path Project. So, Josh would you like to introduce yourself and NYPA.

Mr. Joshua Ramos, Environmental Operations Manager, New York Power Authority said that many of you know that New York Power Authority the largest state public power organization in the nation of 14,000 miles of transmission 16 generated facilities. So, I won't be doing the presentation, but I will be here for the Q & A session so, if you guys have any questions, I'm happy to join the discussion.

Mr. Luke Falk, Vice President, EnergyRE said so what is Clean Path New York it is as Eric indicated a project that couples the generation of renewable energy all, across the State of New York with the transmission link that connects the western Catskills into Astoria and Queens. One thing that I should note about our project is that all the energy that is being generated and utilized in our project is being developed within the State of New York and our transmission line is wholly contained within the State of New York. It's similar in capacity to the Champlain Hudson project on the transmission side so they have a 1250-megawatt project ours is 1300-megawatts so, it has roughly the same capability of delivering energy into New York City. But rather than using hydro power our portfolio of generation resources is comprised of wind and solar all of which is new, none of the generation that we're building is located, in New York City it's all upstate and around the state will get into that in a minute. But the portfolio is roughly

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3,800 hundred megawatts which is really, quite a significant amount of new addition to the system. Of the transmission line runs 175 miles like the Champlain Hudson Project it's all underground, or underwater it's also the same HPDC technology which is much more efficient at transmitting large volumes of power over long distances and we spent portions of time in the Hudson and Harlem Rivers as well. On the transmission side it's a 3 and a half billion-dollar investment and on the generation side it's 7 and a half billion-dollar investment.

By doing everything within the State of New York between generation and transmission we create 8,300 hundred jobs all of which are located within the state and when we deliver the volume of clean energy that we're talking about here into the city even though primarily all of it is delivered into Queens there's a cascading ripple effect across the entire states electric system and it winds up supplanting or laying off 22 percent of all of the fossil fuels prior generation to make electricity 22 percent per year for the life of the project. So, when you bring that much clean energy on-line and you reduce the fossil fuel generation by that much as we alluded to in the earlier presentations there's a huge corresponding reduction in emissions where billions of dollars in avoided negative social and public health impacts across communities primarily in the downstate area. So, here we're talking about nitrogen oxides, sulfur oxides and really particular matter pm 2.5 which is the biggest surge and driver of a lot of the negative health outcomes associated with frontline communities hosting fossil fuel fired generation traditionally. So, really at the core of our project even though it's in service of meeting the State's ambitious clean energy agenda and even though that agenda is animated primarily along the lines of climate change we view our project as being animated centrally around issues of environmental justice and mitigating the impact on frontlines. So, to talk a little bit about the routing.

Mr. Shashank Sane, Executive Vice President Transmission Development, Invenergy said thanks Luke. So, as Luke mentioned the transmission line originates in the Catskill region near the town of Delhigh in Delaware County from there we go about 105 miles through an existing corridor where the New York Power Authority has an existing transmission line they have an overhead transmission line in what's called the Marcy South Corridor and we will be running our clean path line underground in that same corridor so not disturbing any new land there. Once we get to the rock tavern area then the line moves out of the right of way and will be using public streets to get into the Hudson River and then will be running through the river down to New York City terminating in Astoria, Queens as we'd mentioned earlier. Now, the route is entirely underground and underwater using all existing corridors, existing rights of way whether that's the New York Power Authority right of way, public roads or the river. So, really minimizing the impacts of our line is one of the key criteria, as we think about the siting. I will just note here while this is the general siting approach there are still smaller siting decisions to be made throughout the length of the line and will be going through that we're in the process

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of making those determinations now. As think as Eric alluded earlier all projects will still go through the Article 7 process which is the key siting process for transmission lines in New York State, that will be kicked off in the later part of this year and that will be the final determination of the exact routing but at a general level this is the route and the approach that we've taken to routing. So there with the transmission line as Luke mentioned our approach to supplying the energy to New York City is an all New York all renewable, solution so what you see here on the map is a portfolio of wind solar projects that will get built across the state and we were very strategic in selecting the portfolio to develop and build to supply the clean path transmission line in New York City. What you see here is a very diverse portfolio split relatively evenly between wind and solar and really spread throughout the state, in the western New York, in north country, and the central part of the state and really the purpose of that was to bring as diversified and as strong of a mix of resources as we could to deliver a very clean a very reliable source of energy into New York City through the transmission line.

The projects as we talked about are in various stages of development so, some are entering construction we've actually entered construction on a project we call Number 3 which is in upstate New York a wind project recently and the others will be entering construction over the next several years. But the goal of it is to have that portfolio where there's diversification to deal with the availability inherent in resources and to bring as much value down into the city through the line as much as we could utilizing the line as much as we could given that it will be a fixed asset there. The one other highlight is complimenting the portfolio with in solar resources with a project which is a pump storage facility, so the pump storage facility is right next to the Frazier sub-station owned and has operated for quite a while that facility is essentially like a big water battery and will be utilized as a resource to balance out availability in the wind and solar resources so when the wind and solar is producing more than the transmission line can carry we will be charging the pump storage and when the wind and solar resources are lower discharging that pump facility again, all with the goal of maximizing utilization of the transmission line and bringing as much clean energy into New York City as we can with the resources in the state. So that's really the story of what the project is, most importantly we want to highlight what the project brings to the city and the state. We alluded to some of the stats earlier, but the project will ultimately provide a 22 percent reduction in fossil fuel generation in the state every year and with that reduction in fossil fuel driving a tremendous reduction in CO2 and other emissions. These emission reductions will drive millions of dollars of health benefits through the state for 25 years through the life of this contract but well beyond that these assets that we're building will be in service for 30, 40, 50 years or longer. So, we will continue to bring clean viable energy to the state for decades and generations to come. So, just to follow on some of those remarks when we look at our model of the electric grid and the impact that our project has on the system, I think it's worth pointing out for our downstate stakeholders that 57 percent of the emissions that we produce occur in New York City and unsurprisingly most of those are approximal to where the fossil fuel

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resources that we are supplanting are located. So, when we look at the dispersion model that looks at where our emissions reductions are actually occurring it's in the South Bronx and Northern Queens primarily that see the biggest benefit within all the communities by virtue of our projects. One thing I just wanted to be clear on even though Eric and Shashank alluded to it when we talk about this preceding in front of the Public Service Commission with a public comment period that concludes on February 7th that's just to give us the green light to enter into the Article 7 permitting process and that permitting process is all about stakeholder engagement and community outreach and it helps get communities involved in figuring out what the optimal routing of the line is going to be and it's a process that plays out over years. So, I don't want nobody at your Community Board to be left with the impression that on February 7th it's like the final opportunity for the community's voice to be heard as our project evolves over time, quite the opposite there is plenty of opportunity for us to have an extended discussion. In terms of the economic development impact of our project we talked about the size of the capital investment, we talked about the creation of 8,300 hundred jobs. I think that there are two points also worth making so Shashank outlined the fact that this is a very long-lived asset that will be on-line for decades to come. Our contract with NYSERDA is for a 25-year term, upon the expiration of that contract with NYSERDA because we're partnered with NYPA on this development NYPA is going to assume full ownership of the entire transmission line internet so that can be used as a resource of the state for the people of the state for decades after the contract expires. Another point to make is that all, of the jobs that are directly enabled under this agreement are going to be subject to a PLA that we're advancing with our partners in the union world because, we think all of the jobs should be well paying jobs with good benefits. In terms of environmental justice, the next two slides are my last slides I know we've been talking for quite some time at this point so, thanks for bearing with us. But this discussion on environmental justice is super important to us the CLCPA which is the climate law that really gave rise to all of these ambitious goals around decarbonizing the electric sector as part of its fundamental premises a goal of directing 40 percent of the benefits of spending on clean energy to what they term as disadvantaged communities. So, when we think about that we thought, how do you think about that, so, there's a question on how, do you define these communities like where, do you draw the boundaries and that's a process that's unfolding under a working group, working under the law at the state level. When we looked at our project and we put our bid together we used DEC Maps from 2019 around potential environmental justice areas, and we forecasted where all our project activity and all the intrinsic benefits would occur relative to those community boundaries. So, on the benefits side we think about investments on the one hand that we make directly, and then we think about some of the intrinsic benefits that the project delivers to communities. So, on the direct investment side we think about investments that we make in the development of generation and transmission directly and then we think about the directly induced supply chain so the provision of goods and services in support of that construction and development effort and we look at

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where that activity is occurring where those materials are being sourced from and we couple that with a Community Investment Fund that I'll talk about on the next slide and forms that's sort of the investment side of our calculation. Now when we look at the intrinsic benefits that we deliver we think about emissions reduction and the corresponding public health beneficial impacts we think about climate change mitigation and system resilience and hardening from bearing our line underground and what we come up with is when you couple all that together we are very well positioned to make good on the ambition of the law and direct a huge amount of benefit to our front line communities across the state.

So, the Community Investment Fund that I spoke of earlier just to finish up the presentation, is a 270 million dollar fund that is animated around four broad pillars of engagement so, the first two are sort of comingled into one around workforce development and enabling a just transition to the new clean energy economy creating pathways and linkages between our frontline communities and opportunities to get involved in projects like ours, local hiring practices, apprenticeship programs, continuing education programs and that sort of leads into the next pillar or engagement which is just education on climate justice and the clean energy at large so that we can prepare the next generation of community members to be as well positioned as possible to get involved in everything that we and others like us are trying to do. Then we have an initiative around expanding access to health care in frontline communities whom we feel have borne the burden of the fossil fuel economy that drives our state for far too long. Then finally an initiative around environmental stewardship which depending on the geography of the project that we're working on will look different depending on the jurisdiction that we're talking about but upstate traditional land conservation, fishery habitat restoration, downstate you know park refurbishing, maybe even something that's close to my heart is maybe having an initiative to electrify affordable housing in front line communities knowing that boilers that are fired with oil and gas are themselves a poor source of emissions retrofitting our building stock is just another like virtuous cycle of workforce development in the community reinvestment opportunity. So, we think that this Community Investment Fund is going to be managed by a Board of Directors comprised of individuals like ourselves and local stakeholders who can advise us who should receive funding for what purpose and to what extent and what matrix we can use to measure the success of the effort overtime. Because we were just designated by NYSERDA as an awardee at the end of September our initiative is fairly early days, but we're going to move quickly in order to make this a reality with electrons blowing into the city by 2027. So, that's the end of our prepared remarks and I will turn the floor back over to the Chair and we will be excited to participate in any discussion that ensues, thank you.

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Mr. Freddy Perez, Jr. Chairperson said that you Mr. Falk. At, this time I'm going to open, up the floor for questions by Committee Members.

Questions and Answers

Mr. Freddy Perez, Jr. Chairperson called for a motion to adjourn.

Motion made to adjourn. Motion duly seconded. Motion called and carried.

MEETING ADJOURNED.