

## **Transcript**

### **Climate Action Lab**

#### **Session on Energy**

**October 26**

**Participants: Marina Zurkow, Subhankar Banerjee, Kartin Amarnath**

#### **Ashley Dawson:**

I'd like to begin with some framing remarks.

First, I'd like to highlight this IPCC Report; affectionately known as the doomsday report that came out a week and half ago. It talked about the difference between 1.5 and 2 degrees Celsius rise. It was commissioned by the governments of low-lying pacific nations, for whom the difference between 1.5 and 2 is a difference of life and death. The report talks about hundreds of millions of lives and collapse of entire ecosystem being at stake in the next decade, in which we have to make a complete change in virtually all aspects of human civilization. It doesn't say anything that climate justice activists didn't already know, but to hear scientists going on the record and being so explicit in calling for the need for a transition away from the development-oriented capitalist fossil fuel economy and culture we have globally was still shocking. We need to be able to take it in and experience the grief. But moving toward necessary forms of action is important, and can inform our discussion today as we think about how to resist the sense of despair that comes not just from the report, but from the response of the Trump administration which is basically to put their fingers in their ears and say "we cant hear you" while they militarize the border to deal with climate refugees. To make the kind of transition the report talks about, energy transition is absolutely key. Scitentists have said we cannot extract any more fossil fuels if we are to avoid the unleashing of unstoppable feedback effects and climate chaos, we need to shut down all new fossil extraction efforts. That's not going to happen at a federal level in the United States. So if we think about other scales, we've got the state level, where a lot of the energy grid is controlled. We've got

the REV, which is a plan based on neoliberal solutions to shift NY states energy infrastructure, but certainly not on the times scale and ambition that we need to avert planetary meltdown. One of the responses to Cuomo's REV plan is from NY Renewables, that have put together some ambitious proposals that are based on two plans: NY state climate community protection act, which was narrowly defeated, and then the proposed polluter fee which is essentially a carbon tax. It talks here about a modest polluter fee for 35\$ per ton; what the ICPP report says 10 times higher than that to just to start; so even in the CBOs there's a kind of lack of ambition. What we can think about today how we can up the ambition and what role we could play in putting forward proposals based in community efforts to push forward really aggressive efforts at policy state city and higher levels. Many other threads will come up as we talk about energy: transportation, built environment etc.; so while I'm talking about energy transition, there are many threads to discuss. Now I'll turn things over to Marina Zurkow.

### **Marina Zurkow**

In a way its good that I'm going first, because I think I'll be a good bridge between food and energy; I'm going to talk about food as energy. and what does it mean as an artist making activating rather than activist work. I dont think of myself as an activist at all and in this context I feel guilty about that not to pay lip service not to people actually doing that work but literally cringing at the level of privilege that this work is created within. I was at a food justice conference in Binghamton and a few minutes into my presentation this state senator who was there screams out "that is so bourgeois" and I just said "thank you Evan for bringing this up because I forgot to give this caveat at the beginning." But I do think there is some value in thinking about how can we extract or extrapolate some of the engagement techniques that artists can bring to any kind of mind-changing conditions. This is a hard time to be doing this kind of work, which is nudging paradigms forward, because we feel constantly in a state of emergency, depression, and paralysis, so this is really hard for me to not weep just sitting her talking to you to be honest. So there

a couple of framing notes: Mark Dion talks about "passionate relation to living organisms." Donna Haraway talks companion species, companion from *companus*, "to break bread with." Who is at the table, how we eat, with whom we eat, and what we eat.

I want to show you a suite of projects. Future Topophagies, which is a portmanteau of topography and phages, which is to eat. I did it at U of Minn with an agro ecologist. There, we developed a set of constraints and assembled groups over two days to play out to plan future picnics. What would a picnic of the future look like? We assembled small teams each based seven paper bags full of prompt-objects with a small team to brainstorm what it would look like. We thought about who is the host of the picnic, conditions of available food, climatological conditions, legislation around food, and the materials on which you eat food? We worked with 6 different groups over two days. We were working right down by the lake, very suburban, if you ever read *Love in the Ruins* by Walker Percy, I thought about that book, this sort of near future dystopia. We had engineers and artists from the collaborative residency of art and engineering, including other folks, social practice at show at the school. People came together and worked on these mobile kitchens; harvested some invasive plants from next door. Created snow cones based on these plants; Silver Carp on a stick. This led to a lot more "constraint-based design work" for me.

This is another one, this was at Rice University, the one that the senator yelled at me about. Its was a dinner for 50 people: eating your way through deep time, the time it takes marine microorganisms to become petroleum, and how do you get people to think in terms of geological timescales. How do you get them to consume that, and design all the mechanics of a project around that? Started with placemats that were lined up on your service place. 8 courses that took you through time. Starting with carbon based life, to salty seas and condensation; becoming oil. This is how oil and gas happens. Forms reservoirs under ground under specific conditions. Then digging it up, the rise of slime, the return of Precambrian conditions. This was the table, set with scavenged Styrofoam, it looked kind of like a city model as the centerpiece. Placemats were then taken by wait staff (who were performers) stuffed them into a vinyl bag behind you. Then my two collaborators who were chefs based in NYC at the time, mapping kitchen techniques, then looking at the gulf, 3 years after Deep-water Spill. We tried to find food that would

address the gulf but too explicitly addressing it. We are very shame adverse and more interested in using pleasure to produce consciousness. Whether that works or not, that's questionable.

Some examples: Algae bloom cocktail; mullet baked in a salt cave; deconstructed gumbo designed like little scientific specimens in glass containers. So trying to think about the poetics of food, food as material, food as story. Here is a salmon-fan. Farmed salmon, which is not fed krill, which gives it red flesh, has to be fed a chemical to give it that hue. So we had some props. Over the course of the meal the servers never removed anything, so it accumulated a tremendous amount of waste on the table. At the end they come out in PVC uniforms and to arrange the waste on the Styrofoam centerpiece. Then we talked about jellyfish and oysters. Jellyfish are really dominant, and a lot of communities that have been making their livings fishing for shrimp in the gulf have retrofitted their trawlers to catch cannibal jellyfish for the Asian market. In 2016 jellyfish are actually the 5th biggest fishery in GA, pretty astonishing, considering no one in the United States eats them except in Chinese restaurants as a kind of banquet food. Final course was a "gusher" with strata, where you have to crack through the crust to get to the oil. There was alcohol in the bottom so everyone was trying to get down to the bottom, then 50 people in silence just doing their best to get it. So it really had a lot of metaphoric power, but it was a very bougie meal.

I've subsequently moved to thinking, in response to that concern about issues of access, about snacks. Workshops and snacks, serving things to people cheap. But, on the way to cheap, I currently have a grant from Lab for Environmental Narrative Strategy (LENS) at UCLA. Part of the deal in developing jellyfish snack was a fundraiser; it was an obscene event; it was auctioned, so the money went to LENS, which was great. We had four months to do all our research around the issue of "what does it mean to eat nimbly" in climate chaos, and what are new kinds of food opportunities in climate chaos? What's wrong with the food systems, and what are the wrongs within the food system, of which there are endless amounts. What will it mean to eat in a way that will metabolize, literally digest, these issues of change? We worked in a UCLA garden, mapped it and thought how to utilize that space in a way that would take people from the known to the uncomfortable, to the unknown. California thinks of itself as Mediterranean. CA and Med

cuisine are almost identical in their values. In the garden, the Med section is right next to the desert environment. So as you walk up the hill you can experience this desertification narrative. What is a food identity? People attached to their food identities. We had dinner at the classrooms at the garden after walk and tried to think how to serve these unconformable foods in a Mediterranean style. So for instance, very few people eat goat meat in this country. Ethnic communities do, but goats are once of the most wasted food resources, because we eat a lot of goat cheese in the US. Thousands of goats are killed as babies because you cant sustain that many goats on a dairy farm. So its an incredible food opportunity. One small goat can feed like 90 people. Then cricket bread, people talk about eating, but they are repulsed. But his was sour dough yeast and 25% cricket. You cant tasted the crickets, just tastes like great bread filled with protein. We served ice plant, on the top 20 invasive species list of LA, delicious, full of vitamin C; another unrecognized food resource. And we served raw jellyfish, which was freaky for some people but really tastes like the ocean melting in your mouth. We couldn't get them direct from the ocean so we got them from a marine biologist who had been raising them as aquarium pets. This is also made from jellyfish, turned into o a powder and then a fancy treat.

What I am working toward now at UCLA is this Rising Seas Jellyfish jerky project. It will be a thousand servings, packed but not packaged, and flavored with profiles form five at-risk regions for sea rise. But of course there are different risk indexes in terms of flooding, vulnerability, equity. We didn't want it to just be distant places to "poor people somewhere else" so it was India, Fiji, Haiti, Netherlands, and LA as ways to talk about different conditions of risk, who has capacity for engineering, who has capacity to make change, and resources for change. I'm still working on the conversation part of this, it has to be an exchange, you dont just get the food and shove it in your mouth, how to get people to sit and slow down. Also served seaweed tea-- seaweed and mollusks are the only things we should be farming in aquaculture.

Finally, compositing, and I have kind of strange relation to humans and the survival of the human species. Its kind of a questionable thing for me. Its a hard thing to say, but I'm just throwing it out there. This project we did at an all night climate change festival in MN. What do you do with drunk people? So we staged a Funeral for the

Human Species that was hosted by dandelions. There were no more human left! So we built a little funeral refuge; you would stand in line, you'd have to wait because there would be ten people in the structure witnessing each others eulogies; so you had a moment to think about what you might say, how you might eulogize humans. The roles were like hurricanes and ash trays and chewing gum, butterflies, there were 300 different roles. We had over the course of the night, cup of dandelion ferment from Russia. We had 300 people, very little opt-out, many people were willing to go along, to imagine being gone, and to speak from a nonhuman point of view. So it was moving and interesting. We had a house band, we wanted to have a celebratory memorial. So that's it!

### **Subhankar Banerjee:**

That will be a tough act to follow after that incredibly imaginative, speculative, creative praxis. Mine will be boring here-and-now type of stuff! I also wanted to start with a disclaimer--if you see me looking very tired in my presentation, it is because I'm exhausted, which will connect to talk. I was in the plane coming from NM, and I was already on plane, but I get this text message from Democracy Now! saying you have to be on the show first thing in the morning. So I say to myself holy crap I have to be on Democracy Now first thing in the morning, and I'm the first guest! But we did our talk this morning talking to Amy; then there was a group of about 25 high school students that I spoke with for an hour.

OK, so for the past twenty years, I've been doing only a few things, but these things go on for a long time. The Arctic work has been going on for twenty years and is ongoing.

Why talking about the Arctic? Ashley became with the ICPP numbers. Oh--and why I brought that art catalogue is to show that I DO exist in the art world by a very very thing thread (laughs). So, numbers. I happen to begin as well here with numbers. 1.5 to 2 degrees, etc. in the report. Those are global averages. But when we talk about particular places in particular times, we are talking about outrageous shifts. In this case, this data is from two years ago. The temperature over the arctic, the circumpolar council did something unique, this part of Arctic the temp was 36 degrees F above average; but over

here in Siberia, it was 36 below the season average. At the same time, the head of National Ice and Snow said the ocean temps in the arctic ocean was being measured as 25 degrees above normal. So when you see 1.5 those are averaged out, they do mean something, but the on the ground reality is already off the map. So forget about using this word climate change, lets call it what it is, climate breakdown.

Listening to theme about the arctic in NY. Why? So, the interview I did today with Amy she asked me to discuss Hurricane that just hit Florida, and its aftermath. What's happening up there is directly happening down here. Because, as this slide says, the dynamics of the Arctic are like a regulator of the globe, effect areas far beyond the Arctic. The arctic is the most critical integrator of our planets climate system. If the arctic goes to hell, we all go to hell. So who is really listening? I'm just giving you a snippet of the larger picture. While this is going on, there is an extreme effort to put petrocapitalism on steroids in the Arctic. None of things should not be a surprise even though they dont get covered.

I started my first trips in 2000, and this is my book *The Earth is Faster Now*. We were already seeing it then. Now technically the first public document on Arctic warming was called impacts of a warming arctic that came out in 2004. This book preceded that even. But the resolution passed by indigenous communities. At that time, the reason we couldnt make change around climate change is because the rest of the citizens of the earth have not seen significant impacts of climate change. While we are already seeing these impacts. So there is a temporal graph it is creating. Now, to everybody's surprise 16 years later, all of that has changed and every part of the planet is experiencing it.

So Trumps energy policy: the narrative is to make America "energy dominant." Now that is a bit of hyperbole, because Obama did this already. Under the Obama administration, America became the worlds largest energy producer. By 2012 US took over both Saudi Arabia and Russia. So, this credit should be given to Obama not Trump.

Secretary Zimke came to Alaska last year and said that the path to that US energy dominance is through the great state of Alaska. All the land and seas, but, and he didn't say this, the Arctic in particular. Since then with various legislative and executive actions, they are opening up (and we are fighting like hell now) these areas to oil and gas.

These actions constitute both an epic ecocide and epic ethnocide. This destroys biodiversity and feeding grounds of global significance, climate breakdown, is an epic ecocide. Ethnocide involves the destruction of food security for Arctic communities who are struggle now. Indigenous communities are already framing it as genocide.

Here what I'm going to say resonates with Marina's point about interlinking of food, energy, climate, and the nonhuman. So what were looking at her on this map shows a truly remarkable place of biodiversity of species is astounding, even though it occupies only a small part of the circumpolar north For instance, this 200,00 strong caribou herd, makes the longest overland migration of any animal on earth. And indigenous peoples all over this area depend on that herd. More than 50 million sea birds inhabit that read as well. Because of this incredible diversity of life, human cultures have evolved with both nutritional but also cultural and spiritual dependencies with, very intricate kinship with-- (and Haraway uses that term) the biodiverse species of this area. So kinship with the nonhuman that goes back a very long time.

So, what are we doing? Haven't slept a lot in the past year. Throughout the whole country cities and states are begin to rename Columbus Day as Indigenous Peoples Day. So University of Alaska had a panel to inaugurate Indigenous Peoples Day and I was invited to speak on it. I'm not indigenous to Alaska or to the Americas, dont know why the hell I was on that panel! All the other panelists were indigenous women. My presentation was about indigenous women changing arctic narratives the writers, artists, activist, policy makers, all indigenous women. but since then we took on the fight, this one in Tom Dispatch, and I've been on Amy a few times, thanks to Amy giving us space to highlight this work. Soon thereafter I convened a panel in New Mexico which was the first to address "Trumps War on the Arctic": 29 indigenous and non artists activists, writers, scientists, look at website. And we printed this up in six weeks usually would take a year to plan. We've just been rolling rolling rolling. Then with Finis Dunaway a letter campaign called scholars for defending the Arctic Refuge which was quickly endorsed by 500 scholars from 20 countries. Then Finis and I testified in DC on June 15th, and then formally submitted it to the Department of the Interior.

That very month a colleague from Pratt edited a volume for Social Text beyond extractive view, where I submitted a piece on multi-species justice, a little bit of



theorizing of what it is we are doing, providing a conceptual frame, and a bit of the history of what MSJ actually means, something different than what multispecies studies has so far been with great scholars like Anna Tsing in anthropology; this is actually praxis. The way I'm articulating it is not theory but praxis. For this book I causally asked my students to do a response to the conference, they wrote a few things, and it was great stuff, and this art by Dine art who really captured the topics we were discussing from colonialism to religion, petroculturalism, liberation, and impacted in what small drawing. On Indigenous People's Day this year, we released it, and its available online. And here is my thin thread to the art world, the caribou photographs in this show at Princeton.

So now while I'm in NY, I'm mostly doing activist stuff. You know what multispecies justice means; but this is what it looks like. Department of the Interior went to Alaska to push forward these executive and legislative acts, and refused to consult with indigenous communities, they did not meet with a single one. So the indigenous groups organized a rally in Fairbanks in Feb (and it is damn cold!), with a key group being Defend The Sacred. Defend the Sacred is largely young women, largely but not only indigenous in AL "we are not environmentalists we are human beings and demanding human rights over corporate rights." All of the grassroots organizing has been by Defend the Sacred. These young activists are coming from several groups, one of which is Fairbanks Climate action coalition. Our biggest fight is not just energy transition, but energy resistance, fighting Because if these projects get launched, we are talking about being stuck for fifty more years.

**Q: Are there any ecological attorneys involved in this work?**

SB: Yes, big time. In fact yes, this is where our biggest fight is, is legal. Alaska is a petro-state. It is like Saudi Arabia or Louisiana. So every politician, no matter republican democrat, or even green will say "yes, I'm all for drilling in ANWR." It is a petro-state. You speak out against oil, you are out the door. You speak out against oil, you're fired from university. In my Social Text piece I write about two U of A biologists in the 1990s, published a paper, that critiqued "Project Chariot" by US Atomic Energy agency. Both of them got fired. UA has a history. I have two faculty friends, cant name them here, who

are on thin threads as we speak. All that said, because 80% of AKs state budget comes from petroleum, 1/3 or jobs rom there, there are still people in AK who are trying desperately to make a transition. This is where Fairbanks Coalition and Defend the Sacred come in. A progressive state senator gave a very powerful speech in state senate in Feb (same day I opened the symposium in NM) how why mechanisms to make the transition. Not that any of it will get implemented, but a very necessary thing to do.

So, the big fight, the reason I was on Democracy Now was that on Wed, Trump administration approved the first production facility offshore in federal water off of Alaska. The first ever actual production facility in federal waters there (which is different than exploratory). So this is a legal fight. There are organization, like Trustees for Alaska, Vicky Clark, main legal org that supports indigenous and environmental groups in AK. And then Earth Justice is the national org that provides a lot of the legal support nationally. We are going to be having lawsuits left and right, and I can probably say this publically, lawsuits are coming. But there is another element that I can only allude to, and that is that government-to-government relations with the indigenous nations are being violated. One example is in Canada: the Trans Mountain pipeline, which was defeated when indigenous groups and legal supporters claimed that the government (not the corporation) hadn't adequately consulted with them. We lay out some of these things in a forthcoming Technosphere magazine piece. But we cant just fight legally. The grassroots part is essential though. As this lawsuit was ongoing on, there was incredible organizing going on, in which academics got involved, Scholar-activists got heavily involved, so even though law has always been misused and abused, it is still something we have. Their project is ultimately to neuter NIPA, national environmental policy act, defunding EPA and other institutions. But for now, even though the laws are often very weak and diluted, they are not entirely gone. Not yet.

Finally, one more thing--I have also been working on the question of extinction, where I am proposing a new conceptual frame for extinction that will become a global project. For the past 18 years, I have engaged with three different geographies. I have witnessed three mass species die-offs, in which 90% of two populations wiped out, what NYT called the greatest wildlife mass mortality event. The problem is that the extinction crisis, including Ashley's great book, is that it has failed to make exception a public

crisis. How do we make it a public crisis. I'm looking at all these dimensions: spatial dimension, temporal dimension, emotional dimension. That's it!

## **Kartik Amarnath**

Hello, thank you for the invitation, this is humbling. I think this is the first panel I've been on where I'm the only one who doesn't have their own Wikipedia page so...and If I wasn't nervous already, this morning I happened to turn on Democracy Now and...(laughs)

So I'm Kartik; I'm the energy planner for NYC-EJA, a citywide alliance of grassroots organizations that serve NYC's most environmentally overburdened communities. In the context of the US and much of the West and the world, the most environmentally overburdened communities are typically low income communities and communities of color. A quick introduction to the history of our organization: more than a quarter century ago the current members of our alliance, which are spread out throughout the four boroughs (sorry Staten island, LOL) started to realize that whatever their local environmental justice struggles, their struggles had structural underpinnings. So the purpose of the alliance was to coalesce and advocate together in ways that directly address those structural underpinnings regardless of what theme of the environment were talking about, really get at the root causes, and design ways to really facilitate fundamental transformation in terms of how we related to the urban environment.

Here is a map of where our members are and their geographic distribution. We have ten members spread around the four boroughs And while this presentation will be NY Centric, I hope that what I can implicitly do is present you with sort of an epistemic argument about how we can see and come to know the city or cities in the current context were in with climate change and unprecedented levels of urbanization. And also present to you a form of practice, specifically urban practice in terms of how to apply ourselves, in relation to each other, to the built environment, economic and political processes etc. in order to facilitate fundamental transformation in ways we want to see happen. A form of knowledge, and ways of seeing, and knowledge production in the form of practice.

Before I walk you through this map, I want you to keep in mind these points of distribution, where our communities are. These thick lines on this map are what the city has designated as SMIA's. These are places where the city has designated it appropriate for land use the siting of heavy industrial activities. Whether its auto body shops or storage of hazardous materials, these areas of the city have the industrial character to host these kinds of activities. When you overlay it with income data, you will see these areas are disproportionately low income. If you overlay these areas with populations of color, you can see disproportionate there too. That's a social and economic overlay. Now environmental conditions. Flood risk vulnerability to storm events. What this means is that areas heavily concentrated hazardous materials, concentrations of poor communities, and concentrations of ecological risk in the era of climate change. Populations that are already disproportionately vulnerable to these exposures and environmental harms.

In relation to heat vulnerability. How this related to SMIA's, Williamsburg/Bushwick, you notice a situation of compounding crisis and vulnerability. Vulnerability to toxic exposure through storm inundation, but its also one of the most heat vulnerable areas. The black bar on the map? That's the area where Con-Edison has projected an "energy shortfall." Overlaying of many forms of crises that manifest material legacies of environmental racism and economic injustice that are manifested in built environment.

The other heat vulnerable are of city is in BX and the multilayered crises there. But lets zoom into Brooklyn. There's Newton Creek, has experienced an oil spill second only to deep water horizon. We have members in that area. Some might say its a gentrifying area, which is very true, and its adds even more a sense of crisis for long term residents who are experiencing environmental pressures and now displacement pressures. The dots are facilities that show how climate ready they are. One color indicates it already has solar-ready, others are places where the city could build a solar project; grey is not solar ready. Not just showing crisis situation, but a potential way to address the situation through introduction of renewable and resilient energy of critical facilities which is what city buildings largely are.

Spatial distribution of our members are either in or adjacent to SMIA's. What do we do with all this info in terms of practice. We are like a policy and advocacy shop for

the movement. We document these ways of seeing the urban environment that are fundamentally informed by the practical and experiential local knowledges of our members and the communities they serve. We document this with an annual report called the Climate Justice Agenda.

NYC Climate Justice Agenda. We show what the vulnerabilities and impacts are for low income communities and how to address solutions we produce recommendations to city agencies in terms of programs and policies that get at these disproportionate vulnerabilities. Here are the first two reports .We actually consult with the city on these. We show them drafts of criticisms of them to make sure that our criticisms are accurate before we publically release them. In terms of how to facilitate transformation, Chantal Mouffe talks a lot about agonism, celebrate the necessity of conflict, and an interesting facet of this work is that a lot of times when we show this to city employees bureaucrats on the inside, they say yes we need this, its essential to provide external pressure to show there is popular support for these types of initiatives that we can then be champions of internally to try and move them internally. So that's a form of practice. Another form of practice that we do is, the technical term is "shut shit down." On the 5th anniversary of Hurricane Sandy, we lead a 5000 person march demanding a variety of different approaches to address the climate crisis targeting Schumer, Cuomo and De Blasio. And in April we released our 2018 version of the Climate Justice Agenda.

Now to get more into the weeds around energy. The reason I began with a discussion of all the compounding forms of environmental vulnerability is to recognize that you cant approach the problem through one particular sector, whatever intervention you provide falls upon a complex ecology of interrelated environmental economic social conditions, and the ideologies that sustain those conditions.

Energy sector contributes to upwards of 200000 "excess deaths" that wouldn't otherwise happen; because of our energy sector. How that's distributed in NY, its 4000 which is the third highest of all the states and of those 4000 more than half are in NYC. NYC has the highest number of excess deaths of any city in the country. How that reality is racialized: 6 out of 10 of people of color live in close enough proximity to a power plant to suffer a pattern of pollution related health disparity. Economic burden of fossil fuel economy. Energy burden is the proportion of your income that goes to paying your

utility bills. Low income and communities of color pay a disproportionate amount of income to keep the lights on, to keep their fridges working, and other essential utilities. It is estimated by the NAACP and the Association of Blacks in Energy that African Americans contribute as customers and ratepayers upwards of 40 billion dollars per year to the energy sector, but at the same time only have access to 1.1% of jobs from the energy industry and .7 % of revenues of the multibillion dollar industry. These are some of the social and economic conditions that fall upon the communities I conveyed in the maps earlier.

So Ashley mentioned REV earlier. How the discourse goes around REV right now is all about this clean energy transition. Use the redesigning of regulatory conditions to facilitate market mechanisms to facilitate the unprecedented uptake of clean energy. But what this doesn't get at is the historical legacies, distributions and patterns of oppression, exclusion, extraction that I've been convening above. So what were doing is trying to harness the perceived momentum around the REV and all its talking points, and pushing for what were calling a Just Transition to a regenerative economy. Not just a transition but a just transition. So what are some of the challenges facing this. Its important across disciplines looking at climate crisis to recognize that emerging solutions to the need for transition can often reproduce the same forms of oppression and exclusion rooted in more traditional and conventional economic sectors. So if you look at the clean energy industry, and you can find these facts at Solar Foundations: over half of the people of color in the solar industry are deeply dissatisfied with their job experiences. Feel they are underpaid do not have clear ladders to job growth and are underrepresented, especially women of color. This is ironic because one of the primary impediments to the growth of the solar industry which is already employing more people than oil, nuclear and coal combined, big issues in the clean energy economy is the lack of skilled workers to work in this sector. So you have gross underrepresentation of major sectors of society that have been disproportionately burdened by the energy sector, and a lack of skilled workers in a sector that is seen as a prime facilitator of solutions. so why dont we just put the puzzle together.

So how are we trying to address the shortcomings of the renewable energy s well as the long-term burdens and forms of oppression rooted in the fossil fueled based economy? I'm going to talk about 4 ways were trying to that:

1. Community ownership of energy resources, particularly community solar, through the democratic ownership of actual energy infrastructure, actual assets. We hope that the revenue generated by these projects can be captured and redistributed locally. My title is "Achieving Racial and Economic Justice Through Energy" and its important to understand this as an epistemic frame. The actual apparatus and infrastructure of energy, the economic processes of it, the ideologies that manifest it it, how its constituted spatially, how its benefits are distributed; that apparatus is a site of political struggle, and through that struggle we can achieve a variety of forms of justice and equity. Some of our members approach community ownership as an antigentrification strategy. You own the asset, you distribute the benefits in such a way as to maintain affordability; and you also have decision making power over who gets employed to maintain the systems; who gets the benefits of the electrons produced by those systems

2. Inclusive financing; deploying capital in ways that have not been done before in market segments communities that have long been divested from

3. Supply hubs for regional resiliency needs. Not just a conversation about solar, but large scale renewables. The way we see these SMIA's are not just where there's a lot of vulnerabilities, but the industrial character of these areas also pose a potential as ell. We want industrial retention, but we want communities to have access to job possibilities in renewable sectors. SMIA's could be hubs for manufacturing and supplying the whole regions resiliency needs. So where do offshore wind turbines get sited, staged, assembled, the port potential for that type of renewable energy infrastructure, its in the SMIA's. How about we re-envision these places not as places of ongoing hazardous industries or luxury development, but as sites that can serve the regions resiliency needs.

4. Finally we are trying to design projects that target some of the dirtiest and most hazardous and inefficient power plants in the state located in our communities.

In terms of community ownership Revitalize, that's our spin; my current responsibility is to coordinate this partnership throughout the state. Uprose in Sunset Park, and The Point in Bronx, as well as PUSH in West Buffalo. It is focused on developing community owned renewable energy infrastructure in these three areas. And in that capacity we are offering input in policies and programs at the state level that can lead to the establishment of similar policies in other communities similar to those we serve.

If you have local ownership it does leaps and bounds for jobs and growth. Community solar is different than stand alone. Community solar and how its different than conventional solar. Pay as you save.

In the area that I was showing you where there's an energy shortfall, Con Ed got 100 million of ratepayer money to design solutions to that shortfall that wouldn't include the construction of added large-scale infrastructure. They are aiming at demand side reduction programs, so you dont have to build a like a whole new substation. They've done interesting things when it comes to commercial and industrial entities, but when it comes to residency programming, they spent millions to design what was basically a light bulb replacement program. The areas were talking about that were disinvested since redlining, in need of desperate refurbishing. Just take heat vulnerability. The housing stock hasn't had meaningful resources to address its building stock in decades. We were asking Con-Edison to direct some of these millions of dollars, a small portion, maybe like 5 million, to pilot a self-sustaining financial mechanism to do deep energy efficiency retrofits that could reach underserved market segments. Its been a nightmare. Utility industry business models are close to a century old. the energy grid is the largest manmade machine in human history. And you have an approach to administrating and stewarding it it that is equally as old. These need to transform in disruptive creative ways that really get at reforming this massive infrastructure in order to address the crisis were in. Getting traction around this is difficult. It is difficult to get utilities to think in these terms. They think in very narrow logics.



Large scale renewables, how can we identify environmental justice areas not just as sites of problems but as sites of the forefront solutions. Here is an Uprose editorial by Yampierre and Climate Justice alliance at a national level. How the industrial potential of these communities can help facilitate the resiliency needs of regions, need for jobs wages, affordability, like Sunset, so we can clamp down on gentrification and communities can exercise leadership.

Finally, this is a map of the dirtiest and inefficient plants in the country. They only turn on when the main plants aren't producing. Days when its really hot or cold and we need power for energy. On extreme heat days, you turn on the most polluting plants in places already suffering from pollution. So there's now something with the state called NYS Energy Storage roadmap. Were trying to ensure that it will prioritize the need to displace the need for generation from these dirty plants while also bringing resilient and backup power to these communities.

A final takeaway: we have a crisis that is compounded upon patterns and legacies that need to address the complexity and nuance and economic and political and material ecologies. Also, in academia, no offense, there is this valorization of local knowledges, while that's true, NYC-EJA is a case study for how you do that and how to utilize different kinds of knowledge production and urban practice. Our board consists of staff from each of our organization so the direction of our alliance is based on the leadership of the very members we serve. the different kinds of knowledge production we do is accountable to the communities we serve. So I showed you these complex GIS maps, it comes from the reality that when we speak truth to power, power is not multilingual, does not take the daily lived practical experiences of communities of color seriously. So the language of empirical data is important, but at the same time, we are accountable to our communities to speak in a language that is accessible to them as well, and that also includes shutting shit down.

**Question One: You mentioned the difference between community solar and conventional solar. Does community solar allow for storage?**

**Kartik:** Yes. We advocate for the pairing of production and storage. The challenge is that even though NY State is embarking on this storage roadmap, Cuomo likes to announce grandiose targets without doing much. When speaking about the regulations about how much its priced, whether its recognized as a utility. Storage developers are a bit reluctant to come into NY state because a lot of essential questions haven't been resolved yet. H. Point in BX is home to second largest food distro hub in the US; if it had been hit at a different time during high tide it would have flooded the distribution center. So when we talk about community ownership in a context like this were talking about backup power that can serve industries and communities that live there. Storage is really important.

**Question:** In terms of dissatisfaction with jobs in the solar industry, has there been any kind of standard developed that can be demanded when talking about a just transition. Also, have you heard about in the campaign in RI DSA to nationalize the grid, what you think the applicability of that is to the grid here. Is it imperative, or just pie in the sky, would it have direct benefits?

**Kartik:** in terms of labor, the Solar Foundation has its solar jobs census that addresses why dissatisfaction is so high. In terms of solutions I would go to NY Renews that has a budgetary carve out for low income communities. It goes into what should be considered a frontline community, who should be in the front of the line for the kinds of jobs we want in this new economy, etc. and what the associated budgetary allocation for that should be. Were providing consolation on that now. Second question about socializing the grid. Those conversations have not been too dominant in NY, there are some unique challenges to socializing grid here that's political and discursive. Cuomo has postured to put himself at the vanguard of progressive politics, but REV is so neoliberal, and the scale is so different, the infrastructure is the size of NYC versus that of RI. And that's just Con-Edison. I think we have like 10 investor-owned utilities in New York State. Its definitely exciting movement that happening in places around the country, but our movement in NY is not yet happening.

**Question for Marina:** I was very interested to hear about Jellyfish, and glad to hear there's a use for them in the future. Would like to hear more about how you are imagining changing cultures around food? There's an avant-garde position that you gestured to in talking about the "bougie" qualities of a specific meal, but I'm also curious if there are other ways to shift in the now.

**Question:** I want to add. I found the goat meat interesting, red meat, in a red meat obsessed culture, the most wasted meat is red meat.

**Marina:** it's a tragedy really, ethnic bias....

**Question:** so I was interested not only in food not only considered "inedible" but also that has racial bias against it

**Marina:** I did a test-case of the meal with an environmental justice organization prior to the fancy dinner a well-known Korean taco truck entrepreneur in Los Angeles. And people at the table were from Philippines and Nigeria and Korea, and many of them said, "well I ate this growing up, or my parents ate this, but you come to America and it's like your shamed out of eating it." Like "my friends didn't want to come near my mother's kitchen because it smelled so different." So how do you move the whole conversation? I need better partners for the conversation. There's a tension between honoring cultural tradition, and abandoning cultural tradition in the face of realities and opportunities that we have now. How do you navigate that? I don't have an answer but I have provocations. I was thinking while listening to Kartik, what if I could make a cooling center where I could also serve snacks. Solar powered, mobile, cooling center that could also have snacks and conversation space. I look for teeny leverage points. But I need to find better and more diverse partners to design these engagements.

**Ashley:** In This Changes everything, Klein argues that we are all products of fossil capitalism, and so we have to all be part of the project of decolonizing the energy system. How do we make the alliances that are necessary for this transformation. But that's such

a wide optic. What are some the key strategic sectors where that can actually happen? SB you were talking about frontline communities, Kartik, about urban communities exposed to toxicity; and Marina, you talking about food cultures that have been marginalized....

**Marina:** Giving people new languages with which to talk to their own constituencies. Clim-ojies, trying to give humorous tools to NGOS that are having trouble communicating across the shutdown that people are experiencing.

**Ashley:** How to communicate, how to forge alliances, how to expand them.

**Kartik:** for us, the frontline communities we serve, there a lot of competing interests we have to navigate. We are anticapitalist, antineoliberal, but at the same time you look at the figures on how many people die disproportionately we have to deal with the stark reality that people are dying. We have our political ideals in the long term, but how do we embody that in a way that can still account for the immediate realities on the ground? We need alliances and equitable partnerships with people across sectors. So even though Con Edison is an investor owned utility, nevertheless having an internal champion at Con Edison, which administers a portion of the grid that serves our people, then that's really important, and if we can politically align with people who, for unfortunately or whatever, work for Con Edison, then we can get a lot done. I would recommend to people in school now learn the different form so knowing in relation to environment and energy that not only critique current conditions but also the forms of knowledge that entities in power utilize and the logics they deploy in order to sustain the system as it is. because it is important to speak to people in power where they are at, whether it be like big data or what have you, but then how to disrupt that too and help us keep people alive in the communities we serve. Its challenging, there isn't a straight answer.

**Subhankar:** With regard to the Arctic we did small scale; in 2011 there was the first solar panel, as a prototype to solarize the communities. But it was defeated at every level. Oil lobby in AK is so huge. There is huge amount of money invested in AK just to defeat

local transitions. They've been trying to show prototype in his own village. That said, what is happening now after all these attempts, there is now coalition being built (with some legislators) but the realization is that we have no choice. But it is complicated with power. Not just talking about DOI or Trump, Im talking about indigenous groups themselves. An outside cannot really get into it. But one example: we did a book Arctic Voices sparked an oil lobby group called "Voice of the Arctic" so we are now fighting Voice of the Arctic Inupiat. The work that has been done by community activists is very important, its slow long process, long environmentalism, decades-long process. not to take away from blockadia. Not years or months. But that work is being done.