

Affordable energy and responsible production and consumption (Ep.6)

Locutor Víctor Ramos [00:00:07]

Moving toward a sustainable and inclusive Puerto Rico. A special series from En Puerto Rico and GFR Media, sponsored by the Puerto Rico Community Foundation.

Luis A. Ferré Rangel [00:00:21]

A social innovation-based approach to Puerto Rico's circular economy can reduce poverty, promote human development, and encourage sustainable consumption patterns. Welcome to the sixth episode of the series Moving toward a sustainable and inclusive Puerto Rico, sponsored by the Puerto Rico Community Foundation, in collaboration with GFR Media. I'm Luis Alberto Ferré Rangel. In this sixth episode we will be presenting Sustainable Development Goal number 7 — Affordable and non-polluting energy — and Sustainable Development Goal number 12 — Responsible production and consumption. And to discuss the intersection between both goals and the concepts of the regenerative or circular economy, I'm accompanied by three experts on the subject. We first welcome Adriana González Delgado from the Queremos Sol collective. Welcome, Adriana.

Adriana González [00:01:16] Hi. Thanks for having me.

Luis A. Ferré Rangel [00:01:20]

Also here is Mr. David Haddock Domínguez, vice president of Administration and Programs of the Puerto Rico Community Foundation. Welcome, David.

David Haddock [00:01:28]

Thank you very much and greetings to all.

Luis A. Ferré Rangel [00:01:32]

And engineer Ingrid Vila Biaggi, from Generación Circular. Welcome, Ingrid.

Ingrid Vila Biaggi [00:01:37] Thank you so much. A pleasure to share this space with you.

Luis A. Ferré Rangel [00:01:42]

Nice to have all three of you here. To begin, it's good to highlight that the three organizations present here are already shattering paradigms, because each one is promoting shared and horizontal leadership that's truly a way to promote sustainable development in Puerto Rico. First, I would like to begin by giving each one of them the opportunity to explain how their organization promotes this horizontal and community leadership to advance sustainable development in Puerto Rico in the case of affordable and non-polluting energy, and specifically, that of responsible production and consumption. Let's start with you, Adriana. Go ahead.

Adriana González [00:02:23]

Thank you. I'm part of the collective Queremos Sol. I work specifically with the Sierra Club Puerto Rico, but after Hurricane María, after five years of work, several community entities came together. The UTIER, the Puerto Rico Electric Power Authority's Managers Association and organizations like us also, Sierra Club, but also CAMBIO, El Puente, Amigos del Río Guaynabo, among others joined in. And we said, 'we cannot wait for a response from an organization other than the community groups for the energy crisis in Puerto Rico.' And we sat down to create the proposal Queremos Sol which, as you were mentioning, is a collective. Queremos Sol is not an actual organization, but rather it's a proposal that many groups have adopted as part of our campaign. And that's part of what gives it strength, as you were mentioning, because it isn't just

one group leading, but rather there are many groups that have the same goal in common. The goal is that we must bring our energy system to self-sufficiency and sustainability based on energy conservation, the distribution of our electrical system and renewable energy, specifically using solar energy as our main resource in Puerto Rico. So, we would be talking a little more in depth, but we knew that we were facing, after Maria, to a reconstruction of our island in different aspects and particularly in the electrical field. And we began to chart our route saying that energy is a common good and, therefore, everyone must have it.

Luis A. Ferré Rangel [00:04:10]

Excellent. Thank you very much, Adriana. David, we know that the Puerto Rico Community Foundation has been working on the construction of community capital for several years. Explain a little then how the Foundation has inserted itself into the issue of clean and affordable energy from community capital to us.

David Haddock [00:04:29]

Thank you. The Community Foundation in its mission has three main functions: an educational function, it has a transformative function and there is a function of increasing performance, both from donors who seek social performance and of the community that wants and aspires for a better community and aspires to some achievements. After the hurricane, we had many approaches from communities, as all of Puerto Rico knows very well, that suffered, seeking donations related from light bulbs, lighting, to diesel or gasoline. Then we went through the donation of generators. But we asked ourselves, what are we doing more resiliently? But beyond resilience, what are we doing sustainably and how can we do it responsibly with our communities? From there, we began listening to the communities about how we could better support them. And the idea of establishing renewable energy projects emerged from the communities themselves, so as not to depend on the Electric Power Authority grid but to depend on their own resources so that they could have access to a basic resource, that they could be owners of that basic resource and that they could run it, which is the management part that happens over time. And that's where we inserted ourselves, the Community Foundation being an organization that essentially manages capital, speaking now of capital, especially financial capital, since we gave ourselves the task of being able to facilitate those processes (about which) we will be talking about later. But certainly, we place our impacts and achievements in different capitals, and we always like to say: which human impact, which social impact, which financial impact, which environmental, cultural and financial impact. Certainly, that is our metric for measuring our impact on communities.

Luis A. Ferré Rangel [00:06:32]

Fine. And at Generación Circular, Ingrid, you have been promoting a way of thinking and developing economic growth in Puerto Rico that's very different, very alternative, but really goes to the heart of what sustainable development is. Tell us a little about what Generación Circular is about.

Ingrid Vila Biaggi [00:06:50]

So, it's very similar to Queremos Sol's approach. Generación Circular is also an effort that arises from the concern and interest of several community groups, experts on the topic of waste management, as well as organizations also linked to the energy issue. Because as it was mentioned, if we're talking about circularity, it isn't simply the management of resources that are used for consumption and production, but we're also talking about the energy issue. And that goal 12 of responsible production and consumption, also integrates — if we read it in its goals — it integrates the energy issue in a very direct way in terms of efficiency and so on. So at Generación Circular there was a very special group of people who had been working on the issue of solid waste management for some time, decades now, and saw how there was no great progress and,

conversely, over the decades there have also been goals presented to divert this waste; recycling objectives that cannot be achieved on any of the dates that have been established. And we said 'wow, we can't keep waiting — like Queremos Sol — for a response from the government'. We have the solution. We have the knowledge. There are communities already working on these issues. So was the private sector, and it has also been working on many of these aspects in a sustainable way. So, what's needed here is to think jointly and propose a different way of addressing the problem, so that we don't continue having those front pages every six months saying that the landfills are closing, we have no alternative. And Generación Circular proposes that. It's a paradigm shift in our economic vision for Puerto Rico. Change that linear vision that's based on the extraction of resources, manufacturing, consumption, and waste, to a circular one, in which there's no waste. This ends up being, perhaps, the final product of a process then becomes an input for a new product or a new use. And in this way, we first take pressure off the extraction of natural resources. We, the consumers, become more responsible people in terms of use and more aware of consumption and consumption patterns. At the same time, it integrates the private sector because it also requires redesigning processes, thinking about the entire life cycle of a product when it's being manufactured. It doesn't simply end in that the person bought it and the person who manufactured it forgets about that product. How can it be integrated back into the production cycle? So, we present this proposal with some very specific objectives and goals and strategies on how Puerto Rico can reduce its consumption and manage to divert 50% or more of the resources that we throw away today to avoid that pressure toward landfills and promote a much more sustainable economy.

Luis A. Ferré Rangel [00:10:15]

Very interesting how we're defining garbage, as it's known, garbage; as a resource. So how do we, our fellow citizens, begin to change the paradigm of our own behavior. And along these lines, Adriana, let's talk a little about how the communities and the bases of the communities where you work are taking control and are pushing for a change in public energy policy, which has also been a relatively new field in Puerto Rico.

Adriana González [00:10:51]

Within Queremos Sol, the first thing we start with is empowering these models of what citizen energy is and where we stop being what we call an energy consumer and start becoming prosumers. And that's how we first begin to integrate what people and communities are, establishing that we're going to stop consuming electricity and we're going to begin to understand where our energy comes from and how we want it to work. With that in mind, we've joined several community initiatives that are models, as we see in Puerto Rico, for the empowerment of communities of their energy. We've seen models that start from the Sierra Club, that these oases of energy are created, where a community center is installed. We've seen some models going a little further, but we always insist that this salvation, as we say, is what we can do for now. We need, as we propose in Queremos Sol, a total change in our electrical system so that it isn't the communities that simply get help or can help that have access to solar energy, but rather the entire world. Queremos Sol's proposal, once it comes out, then a feasibility study is done with the CAMBIO organization, when we'll establish the numbers, what all those details are, that in Puerto Rico we can achieve 75 % renewable energy use in 15 years. And that isn't counting, as we know, the people who are changing to solar energy on their own, etc., but this is using the funds that are coming, that there's much discussion about these funds in Puerto Rico for the so-called reconstruction. We believe that 100% resilience can be promoted in homes by the year 2035 and that, again, although these community models that we work with have helped in these first years, we must ensure that public policy in Puerto Rico assists those people who cannot subsidize their own electrical systems. And that's why we've also begun to make known some examples of small

solar systems that people can have in their homes. And very important for the proposal is that right now most of the energy in Puerto Rico is produced in the south and we know this because we've experienced when a cable is cut, when something happens to it, and the energy is out. Part of what we want is for our energy to be distributed, so that energy is being generated where we're using it most. And this will empower people, because then the communities will have rooftop solar energy generation centers at their homes, close to where they need the energy. And we're not going to have these interruptions that we see constantly now. You can see Queremos Sol's proposal. It has several versions that have been put online. It also has this feasibility study. But we're betting on the fact that communities are responding now because we cannot wait, but that the government must also respond.

Luis A. Ferré Rangel [00:14:14]

Very good. Ingrid, did you want to comment?

Ingrid Vila Biaggi [00:14:16]

Yes. I believe that one of the most formidable aspects that has happened on the island after Hurricane María has been the dizzying increase in people's capacity to deal with this energy issue. It's no longer an issue that is relegated to the fact that public agencies are discussing issues with very particular private sectors and people are sitting back, simply being recipients of the information. No. People want to participate, people have been informed and we could see it in a very concrete way in the development of the Integrated Resource Plan that was approved in 2019. The first Integrated Resource Plan was developed in 2016 and I believe that there were, I don't know, maybe barely five organizations that went to the public hearings, there, to depose and present alternatives. In this case, the Energy Bureau had to expand the number of public hearings and it had to be deployed throughout all of Puerto Rico, because there was a citizen demand for participation and those public hearings were at capacity. So, we're, I believe, achieving that citizen training, that horizontality that's required for these changes toward sustainability, and that citizens feel that they have participation, that they contribute and can contribute to these processes. And that happens in both Queremos Sol and Generación Circular. We're seeing that citizens want to take ownership of this. It isn't a matter (of) that they're willing to simply relegate it to the public organization or the private one to resolve it. They also want to be part of the solution.

Luis A. Ferré Rangel [00:16:01]

David. From the Foundation's point of view, has this experience been the same for you?

David Haddock [00:16:08]

Yes, it has been the same. There are two important variables that are intersecting, which are creating the ideal conditions for this transition and this transformation. One is public policy. I won't go into those details much, but there is public policy already established that we're going to move, and we want to move. Even regulations that allow us to consider microgrids, the net metering connection, eventually moving toward... being able to share energy across the lines. And as Adriana said earlier, be prosumers, not necessarily consumers. So that public policy is there. There's another variable as well that comes with mostly recovery funds, not just immediate relief. Those for recovery, funds coming from different situations or different areas to then... make a transition to renewable energy, be it the government. I'll talk more about the community part because we've been working on community projects in which it's not only private but also federal financing, which allow us to establish solar communities, critical facilities that then operate with 100% renewable energy, which is the project we are doing in Culebra. That project brings a challenge that, for me, is a great opportunity, because we're talking with the Economic Development Administration, the EDA, the critical facilities also defined there as businesses,

critical facilities, and nonprofit organizations, who can then, through this federal grant, have renewable energy. Now, the federal government doesn't allow us, the Foundation, to transfer those assets, at least for the first ten years. What has the Foundation done? It creates a subsidiary so that it then goes to the Bureau, requests permission and can manage the sale of that renewable energy. That's to give an example. I think that those variables have intersected, they are creating the ideal moments. I would also like to talk later about how these Sustainable Development Goals intersect with the projects that I know our three organizations carry out.

Luis A. Ferré Rangel [00:18:42]

Yes, we're going there. I would like to know, in the case of Queremos Sol, a little more specifically, which are the communities where you feel that the most cutting-edge work is being done and how that work is inserted into the concept of regenerative and circular economy.

Adriana González [00:19:01]

We believe that the first communities that have been, as we say, spearheading, have been those that have sadly been contaminated for many years by fossil fuels. The southern communities that have been fighting against coal. The communities in Humacao and Peñuelas which have been fighting against the ash deposit. And more recently, some communities that have been battling against methane gas here in San Juan. And that for us is very important because we aren't going to be able to achieve renewable, sustainable, community energy, as we want it, if we don't start by recognizing these great monsters that we have on our island, which not only set back our sustainable development and of renewable energy, but they're contaminating communities. And within those same communities we have some very good, very excellent examples of how the communities have said 'we no longer want them to continue polluting us, instead we want renewable energy'. In the south, in the El Coquí communities, they've been developing a community microgrid project for years, in which the people themselves learn not only to be prosumers, as we said, but so that they know how to use their solar system. And those communities of El Coquí, in the south, have been, as you said... the spearhead of the communities that have not only lived and suffered what fossil fuels are, but have said that's it and we're going to change.

Luis A. Ferré Rangel [00:20:30]

Ingrid, along those lines, for you, what are the signs of this possible turning point, where the community is taking control, citizens are educating themselves. Where do you think this citizen pressure is going and what can you anticipate in this regard on the issue of circular economy as well, obviously?

Ingrid Vila Biaggi [00:20:51]

Yes, yes. Well, I believe that citizen pressure — a product of increasing this capacity to understand and delve into the issues — definitely comes to occupy a space that has been left somewhat exposed and empty in the face of the problems that the public sector has faced due to the fiscal crisis, the shrinking of the government, austerity, which has truly left the government without much capacity to plan. And given this lack of planning that previously came from the government, the communities are occupying that space. And that's what then leads to public pressure to change public policies, as David previously mentioned, those reference frameworks. Many of them are the result of that citizen pressure, that is, that citizens are demanding more. There is still, obviously, a lot to improve in these public policy frameworks and structures, but I believe that there's the great leap that we may be witnessing if we continue moving in this direction and even more so if we achieve greater receptivity of the public sector to this type of approach. That there be greater openness so that these solutions that are coming from the citizens, from the communities, come to nourish and come to collaborate and be able to support public

management more directly. I believe that if this synergy were to occur between public management, the need and knowledge that arises from the communities, at the same time, the capacity that we have in the local private sector, we could have a very different Puerto Rico. But they are things that must be cultivated. Many of them have been occurring in a somewhat organic way, but we must achieve collaborative and concerted work to move forward.

Luis A. Ferré Rangel [00:22:53] David, did you want to add anything about that?

David Haddock [00:22:56]

I wanted to add that there was a definite revival after the hurricane. Many communities organized themselves, others reactivated and have remained active. And from the Community Foundation, those we've worked with, and it's surely the experience of our colleagues, many of them are already working on a more sustainable path, far beyond resilience, which is the ability... to get up, and recover quickly. They're already thinking about sustainable projects at the level of food production, at the water level, how to then treat their own water and consume less water from the Water Authority. In terms of renewable energy — which is what we're talking about — for example, in Utuado there's an organization that has a seed bank for its farmers after an emergency has passed to be able to sustain themselves, planting, cultivating, and harvesting. And other organizations that have continued to work with a much more sustainable approach, including how they use resources or solid waste for their compost processes and other things they do.

Luis A. Ferré Rangel [00:24:10]

As a journalist, it has been fascinating for me to see how communities have matured in their thinking, in their public policy proposals. To make these ideas and these proposals visible, it's important that the media follow them, that the media stay close to these communities. Because there was certainly this stereotype from a few years ago where the media thought that the communities weren't there, they didn't have all the necessary information, they weren't well organized. It was the government authorities that had to be turned to for answers. But obviously in the last five years there has been an explosion, as was discussed here, and an accelerated maturity that I think perhaps was pent-up during so many years of so much struggle and new players, leaders who entered the field and began to mature many of these proposals.

David Haddock [00:25:05]

It's important to mention that not necessarily waiting for help from the government, financial support from the government, but also with private funds and projects that generate income to then allow them to continue. That's very important and I'm seeing it more lately. If I go back to the experience I've had at the Foundation, I'm seeing projects, more in recent years, that have been extraordinary with that vision.

Luis A. Ferré Rangel [00:25:32]

Yes, the concept of social entrepreneurship. How each of these organizations and people, men and women, can become social entrepreneurs, whether managing a rural aqueduct, whether directing an agricultural corporation, so on. I also wanted to ask Ingrid, for Generación Circular, in terms of public energy policy, what are the steps to follow right now to be able to move in a much more accelerated and more concerted direction?

Ingrid Vila Biaggi [00:26:02]

Well, as for public energy policy — I say, and I make it clear that Generación Circular is also a proposal, it isn't an organization, I work from CAMBIO that collaborates with Queremos Sol, Generación Circular — but I believe that from the point of view of how to move forward on the

energy issue and it's closely linked to what we've been discussing about this horizontal platform, this citizen capacity, since the energy response has to follow that same structure. And following that same structure, what it implies is that citizens take control of the energy issue, they become people capable of generating their own energy through their residences, through photovoltaic systems that can meet their demand, manage their demand in a way to have efficient and responsible consumption. So, we're talking about moving from this centralized vision, from a centralized generation system, and in the case of today still 97% dependent on fossil fuels, to a decentralized one. In other words, and this is a significant change as well, it's an important leap, but it's something that's already happening naturally as well. In other words, the government hasn't yet taken the necessary steps to promote, to embrace this type of concept, but people are already taking steps and we've seen it in recent years with the adoption by those who can buy these photovoltaic systems in residences and businesses. We've seen that the only renewable energy component that has grown at a greater rate in recent years is rooftop photovoltaic systems. And yet, even then, we insist on these larger-scale projects that aren't necessarily aimed at meeting a demand in an immediate manner, but rather continue with this centralized structure. So, it seems to me that that would be the great change in public policy. It's changing from that vision of centralization to understanding that it isn't only that we technically must decentralize with these systems, but that people are also calling for a decentralization of governance.

Adriana González [00:28:25]

I was also going to contribute to what they were talking about, that not only are people already prepared, not only are people already activated on public policy issues, but they also understand, as we were saying at the beginning, we have several proposals here that are being presented, Generación Circular, the Foundation's projects, aren't things that can happen in a vacuum. We need a change, as the Sustainable Development Goals themselves speak of, in many aspects, but they're all part of those same goals and we see it in how the communities are organizing themselves and in the proposals that, in fact, as Ingrid was saying, many of the people who work at Queremos Sol also work at Generación Circular, because we believe that energy is one of the goals that we urgently have right now, because people need it to live. Energetic changes cannot happen in a vacuum. We cannot create this distributed solar energy network without creating changes not only in policy, but also in the paradigm of our communities. The Generación Circular proposals to change our so-called waste system are in line with everything that we also say in Queremos Sol. And that's also why these solutions cannot occur in a vacuum and beyond because we know that we live on an island that is affected by climate change issues and that transformation that we're talking about not only has to happen in the form of infrastructure and access, but also in how we lead our communities.

Luis A. Ferré Rangel [00:29:58]

The concept of an island, the concept of having a defined space, we're not a continent, we cannot buy energy from anyone. We import everything we consume, unfortunately, how does that aggravate our situation and how can that be an opportunity for us?

David Haddock [00:30:17]

If you take, and Adriana mentioned it just now, pollution of our communities... not only the pollution from the use of regular energy, but when they were months without electricity, the fuel, the heat that this produces, the pollutants, the gases... Remote communities, especially communities... throughout Puerto Rico, but communities very close to the Cordillera Central had not electricity for the longest time. And, it adds to the cost to that, definitely. That's why you're seeing the will of the base to transform, because it's much more reliable, it isn't interrupted. We have experiences... both individually and collectively, such as in the Toro Negro Solar Community,

Esperanza Village in Juncos, Pirucho Coop which is the Electric Cooperative in Caguas. So those experiences are there, not only, as I say, on an individual level, but also collectively. And I think that other organizations and other communities are joining in, in addition to what we're doing individually. Some taking on debt because they must invest to be able to have renewable energy. Others with their savings. And other people have been able to participate in some type of subsidy in some way.

Luis A. Ferré Rangel [00:31:53]

And we can now direct the conversation, to conclude, toward the concepts of circular economy. What I have also called regenerative, because you regenerate, reuse, and create new resources with what you have. Also, Ingrid, this is an ethical way of living life, and it's adopting personal, corporate, and national principles of taking care of the legacy and not being part of a model of extraction anymore, but putting an end to that and becoming part of this economy which is seeking to regenerate itself. Do you agree with that assessment?

Ingrid Vila Biaggi [00:32:36]

Yes. I believe that on many occasions — and this philosophy isn't new and is something that's studied in ecology, it's how nature operates in a circular and regenerative way — in nature nothing is wasted. However, human beings have adopted a way of life and a way of economic development that has in no way attempted to emulate this concept of circularity. And so that we also have context, this isn't an issue exclusive to Puerto Rico. At a global level, an analysis of the circularity of all countries in the world was published and only 9% of the economy is circular. So, the gap we have in Puerto Rico is a gap shared with the rest of the planet. And that's why we all have the responsibility to work toward this new model of regeneration. And, again, we're going to emulate nature by just looking at how the world behaves and how it works beyond the human being and leave that, perhaps, so anthropocentric vision and understand that we're part of a much broader whole and that it has dependencies on each other. We see it in climate change. We see it in so many aspects that are hitting us already very head-on and that they can no longer continue to be ignored. To the extent that we can adopt these modalities and continue learning from what Mother Nature has to teach us, I think we will be able to move forward.

Luis A. Ferré Rangel [00:34:06]

Thank you, Ingrid. And to give the floor to David, I simply wanted to comment on how this dichotomy of extraction also separates people, creates political nationalisms, creates more violence and we already see what's happening in the Amazon under the Bolsonaro government. So, this way of seeing nature, how does the solution also bring humans closer? David.

David Haddock [00:34:31]

I wanted to share, listening to Ingrid, that I believe that there's a great opportunity to talk to communities, that some are already working on the circular economy. We who work with community incubators, which provide support to people who have business ideas, are topics that we can integrate to emphasize it, disseminate it, so that it can be better understood. I think there is fertile ground in the communities right now to not only listen to it, but adopt it, even when they're going to implement it and when they're going to launch it. I think it's a great opportunity to continue talking and then to concretely understand in the communities how they could do what they're doing. I think there's very, very strong ground. So, I present it as an invitation to... continue talking and then see how that can be translated into an entrepreneurship that's taking place right now in the communities.

Adriana González [00:35:30]

And adding to what extraction is, and we're talking about fossil fuels, and we can talk about oil.

When we produce plastics, we're using this same fossil fuel. So, we look again at how all these solutions are related and we look for the same thing, as you were saying. That people can not only live, but can live healthy, with access and with dignity. What extraction is, as we were saying, not only for the creation of materials, but for the burning of fossil fuels. Here in Puerto Rico, we burn coal that is extracted in Colombia, which affects communities there. And we want to stop having those relationships, perhaps, as we literally say, "toxic," with these communities, but rather regenerative, in which we can use the example of Colombia, in fact, about who the recyclers are who have cooperatives there to collect bottles and plastics and other recyclable things. So, we must realize that all these solutions come tied to changes in our communities, to infrastructure changes that we need, but beyond that to the change, as I was saying, of those relationships that we have not only with our island, but with the other countries in the world.

Luis A. Ferré Rangel [00:36:42]

Well, thank you very much, Adriana González Delgado, from Colectivo Queremos Sol; David Haddock Domínguez, vice president of Administration and Programs of the Puerto Rico Community Foundation; and to engineer Ingrid Vila Biaggi, from Generación Circular, for offering us these coordinates of Puerto Rico's future and present.

David Haddock [00:36:58] Thank you so much.

Adriana González [00:36:59] Thanks very much.

Adriana González [00:37:01] Greetings to all. Thank you.

Locutor Víctor Ramos [00:31:12]

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