

Vjeran Pirsic Transcript

Tue, Dec 27, 2022 7:53PM 54:52

SUMMARY KEYWORDS

energy, people, croatia, communities, photovoltaics, zagreb, island, project, companies, point, big, vision, produce, megawatts, building, democracy, transition, croatian, renewables, recycling

SPEAKERS

Vjeran Pirsic, Michael LaBelle



Michael LaBelle 00:00

For a break in the wall, the challenge of energy communities interview with vision and pure shapes, Episode 73. What does it take to build the energy transition? Usually the question is phrased like this, the energy transition is about deploying the right technology. But with this framing, we lose sight of the more important element in the energy transition. It is the people that build communities to support the new technologies, behaviors, and educate others. So these are the people creating the real energy transition. Welcome to the My energy 2050 podcast where we speak to the people building a clean energy system by 2050. I'm your host Michael LaBelle. This week we speak with vision pier six, resident businessman and local campaigner on the island of Kirk in Croatia. As you hear our vision is not a usual guest for this podcast. But then, I don't know who is. All I can say is that vision joins the eclectic mix of interviewees who really have interesting stories. And, as you'll hear, vision has really an interesting background and why and what led to his involvement to community activism that is now pushing for energy and nice energy community on the island of Carrick. So the overall story for today is how the island of Carrick is building a more sustainable ecosystem, moving from recycling to energy communities, and what they're doing there is really building a more self sustainable and self sustaining Island. And as you hear a vision paints us a colorful and vivid picture of what growing up and Kirk and Yuka Slavia under Tito was like how Pink Floyd Rubik's Cube and even visions of passive houses in 1980 set the stage for environmental campaigners to block there was this idea of a of Soviet and then a Russian plan to build an oil pipeline from Russia, to the Adriatic. And vision was really a leader in this movement to stop that from happening. The interview is essentially divided into two parts. The first is about vision, his background, upbringing and early environmental activism. And the second half we discuss energy, democracy and energy communities. Before listening, it'll be helpful for you if I paint a picture of our meeting, at least I'll try a little bit. We met in his home on the island of Kirk on a rainy, cold December day, the island was relatively deserted, in my opinion, although vision as you're here corrected me on this. But really, there wasn't too many people there, there was only a few cafes open. But it was what you would expect in the Adriatic in December. But it was beautiful to be there. And I'm really happy that vision opened up his home for this really in depth and insightful conversation. For me, both visions personality and his stories provide a greater context of the people making the energy transition happen. I interviewed him at the end of traveling, as you've heard from other podcast episodes throughout Europe and a

range of countries from Romania, to Estonia, to Finland, off to Poland. And really, these are the people that are building with their own hands, the buildings like the physical houses, and the infrastructure necessary for a zero corporate and world world to happen. And their experiences are very important to listen to. So this is, like I mentioned not a typical, say policy orientated podcast, but I really think is from the ground up. And I really embraced and I really enjoyed my time with vision because he is reflecting what the ground level looks like in a country in an island in a country where there it's certainly ripe for renewable energy to be deployed. But there's a lot of political and social challenges at play. Certainly, the Croatian government would probably object to some of his statements, I'll just put that there. But as a social scientists, we learn to listen to people and really take their opinions into account and we assess the policymaking process and assess how companies are operating and how does that feed into understanding what the energy transition is really about. And in the topic of energy communities. I think this ground level perspective, it is even more important to understand and to listen to, then I would say maybe some policymakers that that use the words like energy community or energy democracy, but what does that mean actually on the ground? So I've come away even more from these interviews. Some have been published so far others will be rolled out in January and February of next year. But I'm not slightly slightly pessimistic, but maybe I won't go there too much. Because much can be made of the current high energy prices driving change. But from talking to people on the ground and seeing the changes in regulations and legislation really seems there's the political leads, and certain companies, certainly not all companies, companies are central for this energy transition, let me say that. But the entrenched dominant companies really are pushing for and trying to maintain the strong, strongly centralized energy system, with little investment into demand reduction, like energy efficiency, Smart Energy Systems, distributed generation, these are all kind of put to the side. And this centralized system still seems to be the dominant mode of thinking. So the concept of energy communities still runs counter to how governments and I would say, big companies see and want the energy transition to unfold, making version point of view, really important to listen to. And as he points out, giving him the power to produce his own electricity would make him a free man, we talk about energy, democracy, and I really enjoyed this part of the conversation. And this is not what the politicians that companies want. I'll let you listen now. So I'll shut up. And you can judge for yourself the views expressed expressed by Virgin, and whether his experience is unique or a common occurrence. And before we move on, for housekeeping notes, I just want to remind and kind of put a plug there for our repowering leadership and energy and food summer school, we're hosting at Central European University, as part of the Central European University summer university program, as part of the Open Society, university network. And applications are open until February 14. So what I can say is, if you liked this episode, you should definitely apply because I think this is one of the key areas that we'll be talking about is energy communities, politics, geopolitics of the energy transition, and how this interacts also with food and security as well. A final note, this interview was done for my current role as an open society University Network Senior Fellow at Chatham House, which I think by the time this is released, I'm no longer that funding was generously provided to produce the podcast. And I'm really happy and fortunate and grateful that the money was there. Because now I've got all these fantastic podcasts, which are very useful for research and for teaching purposes. So certainly the money we'll be living on and the output from this project we'll be living on and now we'll have time to write. So that's the most important. And now for this week's episode.

V

Vjeran Pirsic 07:33

My name is Amir empirische. Rich. I was born in Rekha. 45 kilometers from here. And we

moved to very this house when I was nine years old. Then I was went to primary school here, and I came back to the third class of the high school to Rica. And then at 9081, I went to study mathematics in Zagreb. After study I went a little bit to London, then I came back. We started with business with the software, it was beginning of the capitalism in the former Yugoslavia, then we had war from 91 to 95. After the war, I went back to London, and then I came back to live on the island in 1999, and I lived very nice until 2002, when Russian President Putin wanted to export the Russian crude oil over the deep carbery GNOME Shell. And the point is that group of about six of us establish NGO eco coordinate because we thought that these things will be disaster for the bay. And we started to fight. And after four years of very heavy fight, we proceed with climate impact assessment that they can't do this project without destroying of sea with ballast water. So after that, we didn't use this popularity in the local community to go, for example, to politics with continue to work in the sustainability projects. And one of the main part of this project is energy transition. But it's not all. The point is that they started we started after the war 1995 To think about future of the island. And there was basically two options. One option who was very popular is to make a lot of urbanization, to make resorts, something what was done in the coast of Spain, or the best case is actually Montenegro. They destroyed the coast because of that. And another Shouldn't is to be on sustainability Wait, because this time they had, we had conference in the year 1992. And group of only few of us started to think about sustainability as a framework as a paradigm sigma. I read like this old Greek word paradigm sigma. And frankly, sound the beginning, it was just four of us. And we used to meet each other once or twice per day, per week and continue to work. And after many discussion, maybe public debate, many presentation, majority of the people started to think about per diem of sustainability. Only one municipality on the island of total seven, they started to make devastation with urbanization, with too many apartments selling for the market. Okay. When they started to analyze us, as a movement, I mean, the people from the pipeline company, as I told you, it was 2002, and project rouge, Bosnia. They said that the reasons why we are so different and maybe so efficient, is because we are a product of the punk rock movement in the end of 70s. Because in former Yugoslavia, the center of the bank was Rica and Maribor, in Slovenia, and also the new wave, which was very strong in Zagreb in the beginning of the 80s. So he was lifted out of the box for the people from PR company in the 80s. Now, much more efficient people. I'm calling big fancy machine to killing the truth.

M

Michael LaBelle 11:56

The machine to kill the truth? Yes, because we have a very

V

Vjeran Pirsic 11:59

efficient PR agency. If you started campaign today, you have very silly sentiment, this time PR agency was not so good. No, so efficient to blockade the civil society now, the extremely efficient and the

M

Michael LaBelle 12:13

peer agency, what's the public relationship? Okay, other companies? Yeah,



V Vjeran Pirsic 12:18

there are companies, if you want to stop some kind of the movement, you rent a PR agency, and they freeze the citizen movement. Now, they're very efficient in this time, there wasn't so

M Michael LaBelle 12:30

in 2002, or at the natives and

V Vjeran Pirsic 12:34

2002. And now they're very efficient. And other things, why we had success in all these things. I'm telling that from the sociology research, not from the something like public opinion or journalist opinion. Another reason is, because this part of Croatia is influenced by the many civilization, can you stop everything we can continue. So as I told you, the pipeline company, they rent one sociological Institute evil pillar in Zagreb, to find why we are so efficient in the public debate. And they told for us because a group of us who are founders of the NGO, we are the children of the punk and new wave revolution, if we can call it in this way. And in our anthropological matrix, we are rebels. And on other side, this part of Croatia that is now for the energy transition, not for the fighting against the pipeline. It is really a combination of the Mediterranean. So of course, because we have Mediterranean with strong influence of the Latin civilization, not only Italian even we had a lot of civilization release until the 20 century here. On the other side, we have Slavic people and Slavic people is pretty different than another, but we was under Austria from 1527 until 1918. So we have German organization, okay as a society, basically, we are good balance between the middle Europe, Slavic world and Mediterranean. And if you go to Zagreb, you have lack of Mediterranean if you go to split you have lack of organization you know, so this is just donate to political point of view. But anyhow, it functionally this so generally

M Michael LaBelle 14:37

live here. And before we progress, I wanted to go back to the punk rock scene, and that question how that if because we have this so I wrote a book. It's called energy cultures. And it takes into account the other histories of different countries and how that influences their energy systems. But my question, so I'm a similar page as you on historical ideas here, but my One question is about how this formation because I think it's very interesting about the punk rock scene and then how that led to this environmental move. Yeah. So I will

V Vjeran Pirsic 15:09

tell you so is it told you I came to this house to this place when I was nine years old. And it was the third class of the primary school. And I grew up here until I was 16. And went back to the third class of the High School in Rica. Because in this time in education in Croatia, you had two classes of the general high school then you had two classes of specialization. It was a reform of the school system in very this decade. And the point is that I was grow up here without bridge without the television except the one state channel and without internet, so I had books, and I had the Pink Floyd music. Okay. And once per once per month or twice per month, I went to

rica by bus to see the very popular movie like Star Wars and buy some records. Okay, of course, we could play basketball. And at this time, this settlement was only 200 people. But then on the end of the 70s, they started to make petrochemical powerplant. And about 70 families. So the Dow Chemical people with the kids came here, and I could start to speak English with native speakers and I can start to learn to play bridge, for example, okay, cards. Yeah. And they made pipelines. So there was three big investment on the island on these in the second part of the 70s, Dow Chemical, petrochemical plant. Then we had the pipeline, and bridge, okay. And bridge was open on the very same day, like Olympic Games in Moscow 1980. So it changed everything. And about then I told you, I went to the third class of the High School in Rica. And then was this kind of the what it is definitely punk movement, but I was never member of the punk movement. I was still listening to music like Pink Floyd. But the point is that kids, teenagers started to become rebels. They think that they must change the world that reality is something different. My personal change was more more back to the Pink Floyd. In 1980. It was very cold winter, I was sitting in this room, and my parents went to the Germany to visit relatives and friends. And the Pink Floyd made album the wall. And I found that everything with a teaching me in the school is not true. It's fake. That the reality is something completely different. And then a little bit Rubik made the cube. And it was first time on all television, from cube recording or the say the space 2001. And one magazine that made the book about photovoltaic about solar houses, not only photovoltaic, but also passive architecture. So this January 1980, was revolutionary my life which still exists, because I've been told by the Pink Floyd with the other wall album, that reality is something completely different. I saw Kubrick movie, I had the rubik cube, and I saw that we have different points of energy. And when I came back to continuously of the third class of the high school, I made a presentation of the photovoltaics to my class. I found in the national geography good article. No, it was Newsweek, national geography, the spatial distribution of the Newsweek about energy. It was after they had the point it was after a second oil crisis. Who was in because Iran Khomeini February in 1979. If I remember, well, Iran had 20 product or 20% of the world production and they produced nothing in February 1979, because Khomeini came, and they stopped production of the oil and export oil. So basically, so that the world is totally crazy. You know, the story with Khomeini and yeah, we had to think about different future

M

Michael LaBelle 19:52

later when the environmental movement began basically this outside so you mentioned that if I would,

V

Vjeran Pirsic 19:58

who knew who have you covered to us? Okay, so, uh, we have to this agency down there. And my parents started many decades before the tourism. And when I came back 1999 I didn't tell you exactly why I came back 1989 After London was left Zagreb, okay, I was London just few years then back to Zagreb. And I came here because of two main reasons first, because it's excellent to live here. It's really pretty comfortable. But then big any big city. And second, there was not a good tourist agency and I had to establish tourist agency who can be good. And we started with Internet selling in 1999. Much before booking.com. Of course, now it's not function because booking.com Airbnb are too strong and everything but anyhow. And yeah, and I had about 60 family square renting apartments through my agency. And every September, we collect we are sitting at the front of the office, drinking wine and comment. How was Julie

season? Or you always have jokes with some tourist or some strange situation, we just comment how it was last season. And September 2002, we was very bold, because we read in the newspaper that they want to export the Russian crude oil through the project grows by Adria. And we had expertise around the table. One guy, he was a sailor. And he said no, it is not problem of the disaster. Yeah, very important. By the way, in very this year, it was disaster of tanker prestige. In France, in Spain, if you remember, they said okay, it's dangerous to have something like prestige, but it is accident. What is not accident is a ballast water. If they want to export 50 million tons of the crude oil, they need to dump in the corner Bay who are close Bay, 5 million tons of the ballast water. And that is exactly the problem. So we had the expertise. And it was six of us, as I told you. And we had three option options. One is to ignore the problem, like the monkeys is the Buddhism, I don't see good, I don't speak, I don't see bad, I don't speak bad, I don't keep bad. Another option is to go to leave, for example, to Vancouver or New Zealand, because I'm software engineer and I can get a job anywhere. And third option was to stay in fight. And when they ask us why you're fighting, we didn't What is your target? We had no target to help legation to try to defend this bay. If you're going to die, we're going to die. If we go into we're going to win, you know. So this choosing between freeze free option run away ignore or fight was exactly product of our mindset from the 70s and 80s. So this is the core, you know, and as I told you, this oil company, they asked strategic Institute to make research and they said it is because of that. Okay. And we introduced we have support about Yeah, parallel with that, as I told you after 95 People start to think about future and group of engineers for a petrochemical plant that made Clarabel Rekha and they started to think about sustainability based on the conference area. And they cooperate very closely to an ESCO center in Paris. They used to come all bugs, full baths of the students to end and they solve all the problems. So the islands but just in the paper, it was a lot of time before PDF. They had a lot of nice project but not deployment. And it's very often they have 1000s of projects without deployment, especially now with time of the EU projects. Yes. And then we said no, we're going to change it and let's see what is the first problem of the island. It was waste management. And we started as a community to think about waste management and it was 2008 2002. We order study from professors, some universities in Croatia at 2004 Study was finished. We want to give us money from the budget and 2006 We started with waste management now we are recycling 60 proceeds at home are we going to 80 We could go we could go even faster but we are only two 90,000 in the winter, and we know how to recycling, but we are 100 to 80,000 This summer, and many tourists don't know how to recycle. Of course Dutch tourists and Swedish students they know but tourists from Ukraine or Poland or Slovakia, they don't recycle so much. And even people who have eaten house from Slovenia, Ljubljana they know how to recycle. And people from Zagreb don't know yet. So we have many ecological projects. We starting with physical planning. We started with food production, with water management with waste management, and lot, a lot, a lot of project and what is your target is energy transition. And if you don't have any sub questions, we can now go to start with energy utilization. Yeah,

M

Michael LaBelle 25:49

that we can move on to the I just want to say that was really interesting background information, though, about how you give you a framework. No, no, exactly. But But I think it's really interesting to reflect on that through this tourist agency that you developed and then that network that you had, yes, other residents, that then that could be a movement itself. Yes, we're totally grassroot movement. Yeah, and then okay, so then now we can jump to the energy the top just

V

Vjeran Pirsic 26:15

just just to finish about it. One of the biggest enemy of us was x equation President message. He was big supporter of this project, Raj Bhatia. He lied for the creation journalist about numbers just to push the project okay. And they didn't like to confirm that we are grass movement. They said that we are paid with Italian shipowners that to stop project here because if he stopped project here the projects will go to three asked what was totally lie because the three is don't have deep of the harbor for the big tankers. In omission. There is 42 meters right on shore. Okay. And the point is that if they told you no question president told you the question journalist that I am paid every month 2000 Deutschmark from three years just to stop kill the project in Croatia, that project will happen in three years. And he knew that sly, and who knew that this is impossible. So it was very big conflict with creation presents, we can come back on that. Okay. So it is very interesting how they want to blame on you.

M

Michael LaBelle 27:36

But I just want to say in the end, you've saved Croatia a lot of money because Russian oil is not so good anymore.

V

Vjeran Pirsic 27:43

No, we saved it. And, yeah, if you go to energy, I lost five years of my life fighting with the oil. I lost five years of my life fighting with the gas, and the last five years of my life fighting with the coal. Because now we're coming to 2009 and Croatia started to make new na 2008. Sorry, started to discuss about your energy strategy. And we found that this energy strategy is basically just how to say they wanted to remove the stopping of the building new power plant based on the coal, which was made by the Croatian parliament and Croatia don't have coal. We don't have lignite, like Boston was Serbia, or we don't have good quality coal like Poland. They wanted to import that from Colombia. And they wanted to make two facilities. 600 megawatts right on shore, one here employment one on Saudi placzek Close to Dubrovnik. So he was fighting me Greenpeace. I will show you everything on the internet later. And the point is that it's really blast last 20 years of my life is fighting with the fossil fuel. And what is important in any campaign, we always have alternative option. In many cases, I came to campaign in the Southeast Europe and asked people local grass movement. Okay, what's going on? And they said, they said we are against the project and said, Okay, but what do you offer? What is your option? I said, No, no, we against the project said no, you must have an alternative. And because we was fighting against the coal in this time and oil, it was before guests revolution. We had to find something. And as I told you, I was dreaming about photovoltaics from the 80s. And I started to make communication with people from photovoltaics industry. And it was companies like first American Solar devas on Frankfurt on order In Germany, and we made a solar cluster of Croatia 2009. And we started to work with summarization. And this process was brutally stop in the 2012. With new Croatian government, social democratic government came. And they said, no, no, we're going to develop coal. And photovoltaics is stupid. And we lost about 10 years. How we lost, they had no feed entirely from 2012. And if we want to make human small photovoltaics, you had to have 66 paper. Now it's only free. And so only after we killed big power print based on coal projects, we had chance to grow up with photovoltaics. That's That's point. Yes. And then they cut the number of the of the projects to free. And yeah, that is that was the beginning. And now I think to explain you what I mean with V. When I said

we, I mean, local community. For example, let's face with the waste management when we started waste management 2006. I didn't tell you that that project was against the state strategy. They say strategy was incinerator that always will be picked up in Croatia taken to Zagreb to be this rate. And we said, No, we don't like it said, You're stupid, because you separate paper from the Commonwealth race, because it will be not so good burning in the incinerator in Zagreb. And now then Europe change the regulation. And now the modern. And this project was supported by the NGOs, of course, by academia, they made the project for us with the business sector, but also with the church, because bishop said to the people to priests, that they obligate three times per year, or the holy mess to speak about recycling. Because guys who are not religious, it's question of ethics. And if you're interested question of theology, because if you save nature, you save the creation of God is from Genesis, yes. So, we are doing all this project as a society. And when we had to pay this our new modern system 2005 about recycling. I was cancelled, independent councillor in the municipality have permission. And more than 100 councilors vote that we gave 5 million euros of our budget to establish the waste management system who was opposite of state strategy. And only one guy in Barska. He didn't know what to what to vote, he was neutral. But all this decision are basically made on the city council's and CEMET energy when we saw 2009 That Croatia is going to be dependent on coal. We said no, we don't like it. We would like to go renewable. And this time we cooperate with the general Foundation, get it set. It's now GIS. And we work in Integra coastal management. And when Croatia become part of EU they stop to financing the things because we are now Europe and they know the financing project in Bosnian Serbia and so they said okay, we still have some money, what do you want to get? And this we said we would like to have energy study for the island and German GIS paid us in the study in 2012. The study showed us how to become energy neutral. And we vote for that on the city council and finally, a 2012 all city council's all seven on the island made a decision that we become energy neutral and Climate Neutral 2014. So the decision which was made in Brasil 2020 We made on correct 2012 at deadline for the Europe is 2050 for the US 2030. And now we are working on deployment of this project. We establish energy cooperative Ireland 2012 As a first in Croatia, and we've established company Ireland cricket energy 2019 to make deployment of that, and now we are fighting with stupid government to make an edgy community. This is another story where we cooperate with really heavy Stiftung. The point is that we He used to say we will do everything good and sustainable. We can organize yourself, we can financing the project, we can make optimization of the projects. In Croatia, we have lack of optimization of the process. We just don't like that executive make a stupid low and buy low sub low act to stop us. That's what exactly Zagreb is doing because Arabic is even good directives like reg two are transforming the bullshit.

M

Michael LaBelle 35:31

What's wrong with the energy community are having an energy community here?

V

Vjeran Pirsic 35:34

Yeah. Okay. So you know about read to directive. Maybe you can explain it a bit more renewable energy directive to European Commission, okay. And they allowed or in the bush communities to have energy communities. And the point is citizen energy sharing the energy and everything was going on. And Croatia made a transposition of these lows of this directive to creation last last December. And there is at least three very stupid things. First, it must be a

one municipality, one energy community that's been to the on the island instead of one energy community, we should have seven. But even worse, they said one low voltage travel station, one energy community, this means the island we should have 300 Energy communities. And last but not least, interactive non profit organization with only one of the options of the organization who can be an aggregator in creation low it can be only nonprofit organization. So we can't make modulation of the profit to invest in the new megawatts.

M Michael LaBelle 36:49

This is all just to prevent energy communities. Yeah,

V Vjeran Pirsic 36:52

they made it because it's interest of the first big companies and second interest of the stupid, low capacity creation bureaucracy who don't now need to deal with the papers about energy communities. And last but not least, the most crucial question is question of smart grids. Because without smart grid, you can have energy communities and blockchain and everything. And we are ready to have it but we are not allowed. We are blocked one year by the law. And we have permanent discussion with the people from Brazil about it. Now we would like that Brasil people push Croatian people government to fix it.

M Michael LaBelle 37:33

But what's what's advantageous about having an energy community on an island really

V Vjeran Pirsic 37:37

simple. You have for example, school with the photovoltaics on the roof school is closed in the summer. And they can give all production to the hotels, hotels are mostly closed in the winter, they can give them back in the in the winter. Or if you have some machines, if we produce something from Monday to Friday, you can get energy from the opener with the vacant houses. And over the weekend. If you don't produce you give them energy back. And after some time of the cleaning period, it can be week, month or year. You said okay, I must pay you for the 20 kilowatt hours. You're not going to buy energy from the big companies. You are not going to sell energy for the big companies. I'm selling my energy for only 60 Mega or only 60 euro for the megawatt hour. The point is that we are sharing in the community. It's all it's saying with any kind of localization against globalization. If we are shedding food, we are destroying companies like Lidl of Calphalon or something like this.

M Michael LaBelle 38:50

So it's it's a way for that

V Vjeran Pirsic 38:52



Vjeran Pirsic 38:52

the point the point of the energy transition is I've been told so much saw in Brazil first the decarbonisation a second is decentralization many millions prosumers third thinks is digitalization, this means smart grid. And last but not least for D is democratisation. And I always make payroll what happened in the IT sector from the 80s in the 80s. We had big IBM computers, UNIVAC ICL and now only the oldest company that had gone only IBM stayed and now we have PCs so same things will happen in energy we do we will not have big companies like eon LW E and like this, we are going to have 1000s smalls energy companies on the local level who will maintain this really strong group use local local energy networks.



Michael LaBelle 39:50

But what about this energy democracy, though? I mean, how does that maybe you could expand on your perception of energy democracy or just democracy and



Vjeran Pirsic 39:58

I wish overlaid on the screen and in the facilities down there we have 6.8 kilowatts of the photovoltaics. And in the basement we have 7.5 kilowatt hours of batteries. Now here heat pump from yesterday, and we have charging for electric car. Energy democracy means that my house is producing more energy than we need. And I can share it with my neighbors or I can give it for the poor people.



Michael LaBelle 40:30

Or you can give it give it away. No, I mean, no, but isn't that a threat? I'm making a joke.



Vjeran Pirsic 40:39

Come to that in a few minutes. That's mean that I'm independent man. I'm free man. If I can walk up in the morning and have my own energy I am free man. If I'm demand came from the state to give me the energy I'm not freemen. Same with the water and food. Okay. And if we own the island have our own energy. We're independent. And we're not going to pay many millions euro to the Arab people for the oil, rush of people for the gas and the Bosnian Serbian people from electricity from lignite. We're going to produce it here. So this is democracy for me. Democracy or democratic. In the old Greek in Athens started when they had enough their own production. There was independent about other things. Okay. Just something about technology. So now we have consumption of about 112 gigawatt hours on the island per year. We had 120. But petrochemical plants, they're made bankrupt. And we need about maybe 100 megawatts of renewable in the mix of the 60 megawatts of the photovoltaics, 40 megawatts of the wind and 10 megawatts of the biogas. And then we can produce up to 150 gigawatt hours maybe. And we need more because now first we will have like less consumption, we will have less because we are going to have energy saving devices. But then when we switch with the vehicles, to the LA mobility, the consumption the island, we grow up immediately and very high. And that's the reason why we need to calculate more. By the way, 52% of the present, pollution are coming from transport. And that is not only cars, it is also boats and ferry boats.

M Michael LaBelle 42:43
Okay. Will they be like electric boat electrification?

V Vjeran Pirsic 42:48
Electric ferryboats. Okay, okay. Even the charger in the harbor, you can see it later, down there. They're not only for cars, they are for cars and boats.

M Michael LaBelle 43:01
What do you say that people that they say? Well, there needs to be baseload generation. Excuse me, what do you say about the argument and there needs to be baseload generation. And so that's why there needs to be a nuclear power plant or a coal fire. Oh, and we

V Vjeran Pirsic 43:15
told you we cooperate very close with academic people from academia. And I've been told that if we change, predict, and present predicament is that production or following consumption? And other will be that consumption following production. Very simple. Today, there is no sun, we're not washing the clothes. We are waiting for the sun one day and then we go in to wash the clothes when. So if I so mathematical models, people in universities Zagreb, they're using Danish mathematical models. And they proved very good for me. There might even be PhD on that, that if we have a lot of renewables, a lot of batteries, we can have. We have no problem with the baseload energy. Because we're going to produce energy. We're going to storage that to batteries at home and the cars and we're going to grow up consumption when we have production. My heat pump behind the house, they're smartly ready. And when the clouds come, they will fall down in a commode.

M Michael LaBelle 44:26
Okay, okay. And what I wanted to go back to the the role that democracy plays in the energy system, and maybe you could expand a bit more on that and how does that feed into this inability to start a proper energy community here and Kirk? Uh huh.

V Vjeran Pirsic 44:42
Let's speak generally about individual if I produce my food, if I pick up my water from from rain, and if I produce my energy from the sun and freemen okay. And if your community When we share energy, or even give energy and food to the people who are poor, we are healthy society. So this is the ground rules, okay. And in the way of energy communities, if I need now to all my extras sell to the big energy company. And if I, when I have lack of energy when it's raining or in the night to buy it from electric company, I'm not freemen. If I can, for example, today, I will

miss maybe five to 10 kilowatt hours, because it's cloudy day, if we can house owner around me, or giving that energy to me, as I could give them back in the summer, when I have 10 kilowatt hours more, then we are solving our problem locally. We don't have needs to have integration with a big nuclear power plants or anything with the state. So that is local democracy. So question of energy democracy is basically twin of the question of the image of democracy.

M Michael LaBelle 46:13

Yes. ties together? Yes. Do you do you think? Because it seems like with Croatia with the islands, that these energy communities could be really beneficial for the countries for energy security for not needing to produce or build

V Vjeran Pirsic 46:29

for everybody, except for the big international company help?

M Michael LaBelle 46:33

Okay. Yes, that's why

V Vjeran Pirsic 46:36

it is so logical, because we have another moment, we have the biggest production in the time of the biggest consumption this summer, when on the island is six times more people than in the winter. And we have production on the private of the consumption, Jury squad who are in the apartment or bow me, they have consumption to the energy who are produced here in the same yard, or the same roof under the same roof. So we're making an expression of the energy network.

M Michael LaBelle 47:09

Okay. And even from air conditioning, right? I mean, physically? Yeah, because it gets hot. 40 degrees? Yeah.

V Vjeran Pirsic 47:18

Yeah, it's not all the time. 40. But even if it's wet, if it's raining, they're using you, though, because humidity we are using air condition. And especially, it would be a question that electric cars, when tourists will start mode coming with electric cars, they will be charging.

M Michael LaBelle 47:36

Right? So rather than building up the I would say what the grid to the mainland or improving that you can improve? No,

V Vjeran Pirsic 47:44

we must give grid to mainland but not as the kernel is a core of energy system. The core of the New Energy System will be prosumers. Who will make who will make the most of the production in their own yard.

M Michael LaBelle 48:01

Okay. And then this balance over the year between the different types of consumers?

V Vjeran Pirsic 48:07

Yeah, I mean, the consuming in the winter is much lower than summer. So it's basically following the sun energy.

M Michael LaBelle 48:16

Yeah, no, just walking around this village. I see that there's it's empty. There's not so many

V Vjeran Pirsic 48:23

people. It's not empty. We have around 1100 people. Oh, okay. Okay. Yeah, but they're working or they're in the house. And today's little bit not so nice weather. Yes. So if you make activities, you can find people, okay. And in the summer, how many people are here? Oh, it's up to six, six to 8000? Because we have hotels and camp? Yes. Yeah. So people are not on the road now. But they are most of them. They're working or preparing for the holidays and things like this. Okay.

M Michael LaBelle 48:57

Excellent. Maybe a few more questions than so. So the big effort began with the recycling and then moved on to this energy, the solar PV. Are there other sources of energy that you're looking at to build

V Vjeran Pirsic 49:13

it? First about project is not only these two projects, we have more than 10 projects. We also think about sustainable use of the protecting part of the nature we work on the transport and sewage system. So we are doing by the book all whole set of the project bases sustainability, but as I told you, we are not doing energy transition as a set of the incident as a set of the one

spot project. We have our general program to make 100 megawatts and it will take 10 years. Okay. Okay, or totally it will take 20 years So 15 Doesn't matter. So, now we are building about 200 houses per year

M Michael LaBelle 50:08
200 houses per year on the island. Yeah, with with

V Vjeran Pirsic 50:11
renewables. Okay. And some of these telephone calls what they said they're going to call you back later yes is people who would like to have all the supplies for the environment phone for subsidies this year, okay. Okay. So, we have communication with the people and we have two companies on the island, who are making exactly the who are making the photovoltaics and we transfer workers even from shipyard to work with renewables. So we are developing a local economy and we are buying photovoltaics panel from the last creation factory, we had three factories now here only one. So we are doing that as the plug in planning program.

M Michael LaBelle 50:59
Okay, so So the impact that Kirk is having by having this with a renewable energy strategy is much broader than just what happens on the island here for the Croatian

V Vjeran Pirsic 51:10
trying to share it with another with another communities in Croatia. We was involved in with pretty heavy lifting But Sonic will tell you much more about it. It's definitely be sharing that not only in Croatia, I was teaching last weekend in Sarajevo in Bosnia. Okay about very same things.

M Michael LaBelle 51:30
So Kirk could be used as an example lighthouse, a lighthouse?

V Vjeran Pirsic 51:33
It'd be a lighthouse for it.

M Michael LaBelle 51:36
Okay, then maybe overall, maybe we can start wrapping this up. My one of my final questions is about the role the EU



Vjeran Pirsic 51:45

delegate, they are giving us directives who can help us when Croatia government are doing something stupid they are doing stupid all the time? To tell them no, no, no, you are bad guys. We're going to call our friends in Brussels and they will make you some education tools.



Michael LaBelle 52:03

But does it work?



Vjeran Pirsic 52:05

We are trying to start yes is starting to work. Okay. But it really happened. This week some some activities like a Chevrolet,



Michael LaBelle 52:14

but as you outlined at the beginning, you've been at this for for decades. Yeah. So you can see how things are progressing?



Vjeran Pirsic 52:21

Well, let's say that we made a decision 10 years before Brasil and our target is 20 because Brazil so it's very simple. We are trying to do the best we can but I think that I will to be pessimistic i When you in green movement you can always see that people are after many years coming to your position. But it's usually too late. And our civilization have at least four big threat. First is climate change. And I think that mine which can destroy it is permafrost second is microplastic. Third is pandemia some kind of the new virus and last but not least, we still have a problem with artificial intelligence. And I didn't touch economy inflation and things like this you know, I think we really have very high probability to finish in some kind of the Mad Max world. Yes. And then we can be some kind of the fortress with civilization will be the barbarians who will run away on the horses when they have no petrol for the motorcycles,



Michael LaBelle 53:43

which is why you stay on the island. No, it is because



Vjeran Pirsic 53:47

they like to be here. But definitely it's a good place to defense.





Michael LaBelle 53:51

Yes. Okay. Thank you. I will end the thank you for joining us for this episode, we produce the my energy 2050 podcast to learn about cutting edge research and that people building our clean energy system. If you enjoy this episode or any episode, please share it. And remember, each episode is equivalent to consuming 10 journal articles one book and 500 charts and how to implement the energy transition. And you get it all in less usually than 60 minutes for each podcast guarantee. I can actually say no other podcast makes us guarantee. The more we spread our message of the ease of an energy transition, the faster we can make that transition. You can follow us on LinkedIn where we are most active on the My energy 2050 page or on Twitter and Facebook. I'm your host Michael LaBelle. Thank you for listening to this week's episode.