

Check It Out! Podcast Transcript
Episode #53
“Scouting clean tech with Tom Ranken”
Sno-Isle Libraries, March 30, 2020



Ken Harvey:	00:00	In this episode, we are going to share with you a conversation we recently had with the president and CEO of Washington CleanTech Alliance. The Alliance has over 400 members and there are organizations that span 10 US states and three Canadian provinces. Those organizations are really at the forefront of the work that is changing the world, making this world a much cleaner and safer place, and really addressing a lot of the concerns that so many of us have around climate change. Three of us sat down with Tom Ranken and I think you're going to enjoy hearing about his work with CleanTech Alliance, and also some fascinating little tidbits about what he does in his private time.
Speaker 2:	00:55	Welcome to season three, episode 53 of Check It Out, the Sno-Isle Libraries podcast for lifelong learners with inquiring minds.
Speaker 3:	01:04	The views and opinions expressed on this podcast may not necessarily reflect the official position of Sno-Isle Libraries.
Ken Harvey:	01:12	Hey, I'm Ken Harvey.
Jim Hills:	01:14	I'm Jim Hills.
Paul Pitkin:	01:14	I'm Paul Pitkin.
Ken Harvey:	01:16	We are in the studio and just pleased to have Tom Ranken join us for this episode of Check It Out podcast. Tom is the outgoing president and CEO of the Washington CleanTech Alliance, which represents over 400 member organizations spanning 10 US States and three Canadian provinces. The Alliance was formed back in 2007. So boy, it's been several years now, a decade and a half almost. It is really been a gathering of business and CleanTech leaders who really worked towards the generation and growth of CleanTech companies and technology throughout the United States. But really looking at what can happen here in the Pacific Northwest and Washington state in particular. Tom, thank you so much for joining us.

(Continued)

Tom Ranken: 02:04 Glad to be here.

Ken Harvey: 02:05 Hey, you're a fascinating guy and we're going to let the audience in on some things about you that even your friends probably didn't know about.

Tom Ranken: 02:17 All right.

Ken Harvey: 02:19 But we're really fascinated by the work that you and the Alliance have been doing over the last 13, 14 years. As I understand, you are working in partnership with the Washington Department of Commerce and that you've actually done a lot to really help the State on a path of just clean renewable energy.

Tom Ranken: 02:43 Well, as you know, that's been an emphasis from the governor and from the State for a long, long time and something we're all interested in. What I've found in the course of my career is, sometimes you get into controversy over climate change, but you never get into controversy over jobs. Everybody's interested in finding new ways to help people get jobs and be successful, so we're working on both.

Jim Hills: 03:06 I was interested in listening to Ken's intro, talking about the CleanTech Alliance with 400 members. Now, I think our paths here have crossed maybe a good 10 years or about the time you started with CleanTech. I don't think you had 400 members 10 years ago?

Tom Ranken: 03:23 No. I think it was about 35.

Jim Hills: 03:24 Yeah. I'm really curious about, during that period of time, how do you go from fledgling group like CleanTech, which was, you're trying to script it together back in 2010, you still are. But now you're at 400 in multiple States, and that wasn't where it was. How's that path, how did that go?

Tom Ranken: 03:43 Well, I'm a big believer, a trade association is a little bit different than a business in that we don't have investors and we don't have to give a return in terms of paying out in dividend checks and so forth. But all of our members are our customers. At the end of the day or at the beginning of the day, you have to figure out a way to create value for your membership. There's got to be a reason for somebody to write that membership check or come to your meeting, or whatever.

- Tom Ranken: 04:04 There's got to be a value proposition. As I said, we're very interested in jobs, how we can help companies get started, how we can help technology get developed out of the research universities and elsewhere, and get to commercialized so that people can use it and companies going to be formed. That basic value proposition is something that resonates with our members obviously or they wouldn't be members. It's developing that, I think, I went through a process when I first joined the organization of trying to figure that out, and that took several months.
- Tom Ranken: 04:35 Once it was figured out, then it becomes execution, how you do those things and we provide value for those members. Each one is a little bit different, so sometimes it's government affairs issues working in Olympia. Sometimes it's meetings we can be because people want to network and find employees, or find partners and so forth. Sometimes it's visibility for their organization. Sometimes it's some of the services we offer.
- Jim Hills: 04:59 I went back and found a news article from the time that you started with CleanTech Alliance in 2010, when then governor Gregoire was announcing an initiative around CleanTech jobs. She had announced that under her leadership and industry leadership, she wanted to bring 40,000 new CleanTech jobs to the State. There was a survey at the time that said roughly 40% of CleanTech jobs were around reducing pollution. So reducing footprint rather than maybe perhaps creating some technology that would need you to have energy in a different way or something like that.
- Jim Hills: 05:45 I'm curious about whether we made 40,000, and governor Gregoire's goal. But did that mix of jobs, when you were talking about jobs for the membership, did that mix of jobs start to change over that period?
- Tom Ranken: 06:00 Then it's actually been a big problem in this field for a long time because 10 years ago, people were talking about that; how many CleanTech jobs are there or what are they, how are they growing? It's really hard to figure that out, to be honest with you. The latest thing I've seen is, it's about 80,000 in the State. But the definition is important. Some of those surveys we'll take for example, public transportation and say those are CleanTech jobs. Some of them will look at research universities and so forth.
- Tom Ranken: 06:28 Everybody's got a different view of what that is. For our membership, some of our members you see it and you know it's a CleanTech. It's a renewable energy company, it's a solar

installer company. It's something that just, okay, we grant that. A lot of our members, particularly the bigger companies that are members, the whole area of being efficient and green, and clean and so forth is really important to them for a lot of reasons. Our biggest member is Boeing, right, is that a clean tech company? Well, no. It's an aerospace company, right? But it's really important of Boeing to be really efficient with our resources.

- Tom Ranken: 07:07 They've been investing in biofuels for over 10 years, new technologies. They've been trying to create airplanes that are not only more efficient to build, but to operate, on and on, and on. Things that are very consistent. There clearly are elements within that company and all these other companies around here that are very interested in their brand, in doing the right thing for their employees, et cetera. We've got verticals like solar or installers, then we've got horizontals like Boeing.
- Jim Hills: 07:39 Sure. It's interesting to hear you say how CleanTech can become ... Well, it becomes a good thing to do. It can also be a good thing for your bottom line to do, and more and more companies are looking at that.
- Tom Ranken: 07:54 That's one of the things that I think has really changed in the last 10 years. As a conservative business person would say, "Hey, if we can save money and fuel or energy, or resources." That's a no brainer, regardless of what your politics are. What's changed a lot and we've seen it with our membership, is the public customers, investors and employers more and more care about this stuff than they did 10 years ago.
- Jim Hills: 08:22 It's good for the brand now.
- Tom Ranken: 08:24 Yeah. It really is. It is good business sense because if you pick your company, if their brand is not green, they have a problem. I think increasingly, that's the case and so they really do care about doing these kinds of things.
- Ken Harvey: 08:39 Well, it's amazing how attention to the bottom line can often spur a movement, or it's being cleaner and safer.
- Tom Ranken: 08:47 For a long time, what's the difference between being green and being conservative with your bottom line? You cut costs and you're reducing the things that you are going into, and how you produce your products, that's totally consistent. A lot of it makes good business sense and it makes good sense for the environment as well.

- Paul Pitkin: 09:06 You find that's especially true up here in the Northwest?
- Tom Ranken: 09:09 Yeah. I think, I don't want to speak for other parts of the country, but we clearly have that ethic. We are the evergreen State and that's been the case for a long, long time. People really do care about where they live and what the place is like, so yeah. The region has changed a lot too, I've lived here for 40 years. 40 years ago was a region, we had Boeing, we had forests, we had farms and that was pretty much it. We've become a very innovative culture here, doing lots of things, a lot of different fields that nobody could even guess at it 40 years ago. All that stuff comes together in a way that makes something really new and exciting.
- Ken Harvey: 09:50 Well, Jim was asking a question from that news article from 10 years ago around a forecast of jobs creation and all. I'm interested to know if you could share some examples over the last 10 years of companies that you know really have come on and maybe come from nowhere, or have relocated here because of the innovation happening in this region, and have brought some significant advances to the region.
- Tom Ranken: 10:29 We've been doing a lot of research into that, because it turns out it's really hard to be successful in that and we wanted to find out why that is. We've got a lot of innovative companies, there are lots of great ideas that pop-up. Even inventors, anywhere you can flip a light switch, there are people that are concerned about energy efficiency and they have ideas. We have fantastic research institutes, and so not only University of Washington. Washington State University is fantastic, and the Pacific Northwest National Lab is amazing, and Idaho National Lab is also. Another billion dollar department of energy research facility in Idaho.
- Tom Ranken: 11:02 We've got this base of just over the top basic technology. The way we've developed our economy here in the last several decades, it's the Microsoft model. You've got an idea from wherever it comes from, you're raising venture capital, you make \$1 billion, you change the world, simple. As well, it turns out that's really hard to do in this field, so there are a lot of really good companies with really good ideas getting started. How you scale them up to hit that 100 employee, that's been more difficult. The thing that's really encouraging though is the big companies, just every single one you can look at, if they've taken that to heart.
- Tom Ranken: 11:42 One of the most amazing stories that we've come across is the Fred Hutchinson Cancer Research Center. There's a guy there,

Bob Cowan that runs their facilities, they save millions and billions of dollars in energy efficiency because this is stuff that really matters to them. It's not necessarily the climate issues that we're talking about, every dollar they save, there is a dollar going into curing cancer. If you walk through that place and see what they've done, they'll just blow you away. They use a lot of energy there and they cut it back by millions of dollars.

- Jim Hills: 12:11 I wasn't anticipating that this conversation would go in this direction. While you can read about curing cancer, it's not in our library so we probably don't actually cure cancer as an organization. However, our facilities director, I've been here four years, has changed our stewardship and our energy use footprint dramatically by applying some technology to monitor energy use. He can turn on and off things in our HVAC systems from his phone, and it makes a huge difference in our consumption. I'm aware of a tax supported government agency, and how much of that tax support is going to energy bills and how much it can go to services for our-
- Tom Ranken: 13:01 There's a straight over tackle really business proposition, and we're going to cut our costs because we have a mission to accomplish certain things. Whether it's cancer or libraries, and the result is something we were trying to push.
- Jim Hills: 13:12 Yeah. It's phenomenal actually.
- Paul Pitkin: 13:14 Yeah. That's a good point. I want to go back to what you talked about with new companies. Because one of the things that we've heard a lot about, which I think is exciting. But as a lay person who's not a scientist, sometimes it's hard to get your mind wrapped around it, which is the idea of CleanTech jobs, like you said, but also CleanTech energy sources. We've heard a lot that this is going to be a new industry. I'm just curious as you'd said, it's hard to figure out why some of these new companies aren't getting going. Is it because it's hard to fund them or is it because it's hard to monetize what they're doing?
- Tom Ranken: 13:50 All of the above. There's nothing about starting a company. I've been in two small companies and started one of them. It is the toughest job you can imagine, it's really, really hard to do on every level.
- Ken Harvey: 14:02 That's why our hats are off to all the entrepreneurs out there, or the new startups.

Tom Ranken: 14:06 They are the heroes of the economy. It's incredible what they go through, and you usually not hear about how hard it is because they don't want to tell you. They want to tell you everything's successful.

Paul Pitkin: 14:15 Then you want to find out how much they've risked to do it.

Tom Ranken: 14:19 Right. I read somewhere that the number one source of capital for new companies is helocs, some loans. Where they take out their mortgage, and it's probably true. That's how dedicated and how much they believe in what they're doing. Not just in CleanTech, but lots of space.

Ken Harvey: 14:32 Don't they normally just start up with an idea, or they've either gotten an idea or they've got a vision for something and they're trying to find ... They either have already figured out maybe the chemistry or the math leads to it.

Tom Ranken: 14:51 We have a program, we call our Cascadia Accelerator that we're working on with Snohomish County on an expanding. But the basic idea there is, and there are lots of pathways to get there. But the pathway we have found to be successful is you find somebody who's got great domain expertise, so they're an expert at whatever; it's software or building some sort of whole solar panels. They're great scientists. But in most cases, they've never run a company, and don't even know how to spell business.

Tom Ranken: 15:21 What we do is we put them in the same room over the course of basically the summer with people that have done that. They ask tough questions like, "Who's going to buy this and why are they going to buy it?" Go talk to people that might buy it. Oftentimes, we find that the technology understanding is a real asset, but the direction that they need to take to make it a real business is very different than what they initially think.

Paul Pitkin: 15:44 They're almost like two totally different skillsets?

Tom Ranken: 15:47 Oh, totally.

Paul Pitkin: 15:48 Of what is marketing-

Ken Harvey: 15:50 Well, it uses different parts of your brain, in my inexperience.

Tom Ranken: 15:54 Yeah. My own opinion is, a successful organization, whether it's a gas station or Microsoft or Boeing, they usually have two great leaders. One is a strategic leader, is at 35,000 feet and is bored

by details. The other one's your technical expert. You've got to have both, and it's hard to have both of those in one person.

- Ken Harvey: 16:13 Well, before we started the podcast interview, we were actually chatting off camera, of my-
- Paul Pitkin: 16:19 Oh, that better not be a camera, [crosstalk 00:16:20]. We're still off camera.
- Ken Harvey: 16:24 Tom, you were saying something, I thought that was really fascinating in terms of quite often the backgrounds of some of the individuals who really have been able to do something really tremendous. Shows that they're not just a scientist, they're not just a mathematician, they're not just a chemist there, they're not just a solar panel designer. There's something else in their background that reflects their ability to actually use other parts of the brain.
- Tom Ranken: 16:57 Yeah. I just finished reading David Epstein's book, Range, where he talks about that word. Where you're having a broader background, often lets people in whatever field they're in, from sports to science, to have a broader frame of reference so they can solve problems from a completely different vantage point than people that are just specifically experts in their field. The suggestion from the book is having those broad-based teams that really do have both your expertise in the field, plus other things that it can bring to bear other ways of solving problems. Can be really effective in having an effective team that can accomplish things.
- Jim Hills: 17:38 We heard that recently in an interview that we did, about a month or so ago with the Edmonds Community College president. Who was making the point that skill acquisition is important, but the fundamental academic rigor that can come with a liberal arts education. The inquisitiveness that comes with that and that foundation is the most important piece.
- Tom Ranken: 18:06 A case in point is that I got my MBA at the University of Washington. I think the student in our class that got the most out of that program had another undergraduate degree in Russian literature. Indeed, she probably was the most successful member of our class. I think in some part, she had that broad background to bring too all those problems. Then she learned a heck of a lot from the program because it was all new stuff for her.

Paul Pitkin: 18:27 I'd heard about that book too, the Range, but I haven't had a chance to read it yet. But it's so interesting because it goes so against the grain of what we thought for so long. That is, you need to just buckle down and think of nothing else but the thing that you're going to excel at.

Ken Harvey: 18:41 The specialists.

Paul Pitkin: 18:42 Yeah. The specialists-

Ken Harvey: 18:43 Are very narrow.

Paul Pitkin: 18:43 -and everything that you do that's not that specialization is making you less the specialist and you're compromising yourself. I think it's just really interesting, this idea, that you can be better at the thing you want to specialize in by doing something else.

Tom Ranken: 18:59 Really in the early in the book, Tiger Woods is one example of this specialization. The data that he cites shows that the sports figures that really excel over time, start multiple sports. Which you could argue that as kids, they pick the sport they're best at and that has an impact. But it also probably has an impact that they've learned different ways to play different games, and they can bring that to them when they eventually specialize in. He argues that at the end of the day, they are the most elite athletes.

Jim Hills: 19:29 You mentioned just a minute ago about the Cascadia Accelerator. Is that a physical place or is that a concept that happens in lots of places?

Tom Ranken: 19:39 At this point, we run it both through our facility in Seattle and we have a partner in Oregon. It's designed so that it can be effective. We have members in Idaho, we have members in the Eastern part of the State, so we want to be able to provide value for all of them. There is some contemplation that it might become physical at some point, and there are some synergies you can create by having people in the same space. Maybe working on very different problems, but they're all looking for raising money in the legal services to-

Jim Hills: 20:09 Yeah. In the entrepreneurship world, there is the phrase, the accelerator. Then in the oftentimes, it's sometimes a shared office location where that kind of synergistic sharing can happen or not. But I was just curious about the Cascadia piece. I also had heard just before Christmas, the Snohomish County

executive, Dave Somers, announced Soundview Innovation Campus. Which sounds like a real place, it's not real place yet.

- Tom Ranken: 20:43 That's correct, yeah. We're working with Soundview and the County, and Economic Alliance, Snohomish County and other partners to hopefully make that happen. The whole idea is to bring something up here that actually would be a physical space that can do all these kinds of things. Use that model that we've worked with, plus have the physical space advantage.
- Jim Hills: 21:01 I've also heard the word incubator, is the Innovation Campus an incubator kind of space?
- Tom Ranken: 21:08 No. Those are probably interchangeable words.
- Jim Hills: 21:10 They look big though. I think the [inaudible 00:21:13] I saw was like 500,000 square feet. That's a-
- Tom Ranken: 21:16 They've got some big ideas, the Soundview guys. Yeah, it's not just the incubator idea, it's more than that. It's something like a technology center that they'll have anchor tenants as well as others.
- Ken Harvey: 21:26 Well, when we think about the synergy that can happen around this, as I was doing some of my research, it seems as if there's been a lot of synergy that's happened in concert with the State in terms of the Clean Energy Funds. Funds that have been set up and approved and then reapproved, and successive budgets at the State level-
- Tom Ranken: 21:52 There've been four capital budgets now, it's spanning back eight years, where the legislature and the governor have proposed and accepted that, put it into play. But really important.
- Ken Harvey: 22:01 Well now, as I was looking at a list of some of the areas where there's been some significant highlights from, I'm seeing things like grid modernization work that's happened with grants to some of the utilities in the State, research development deployment work, the energy revolving loan funds. Then I see a number of either utilities listed, like Seattle City Light and Snohomish PUD, or I see companies like one Olean CalPower for advancing solids and nutrient recovery systems, converting manure into fertilizer.
- Paul Pitkin: 22:43 It's pretty amazing stuff.
- Ken Harvey: 22:44 There's some ones that are better-

Paul Pitkin: 22:48 You'll not get this on just any podcast, [crosstalk 00:22:51].

Ken Harvey: 22:50 The [Janiki's 00:22:53] biodigester that is producing clean water and renewable natural gas from farm waste and Microsoft for fuel sales in data centers. There's some significant work that's been happening that seems like it's accomplishing the Alliance's goals.

Tom Ranken: 23:14 Yeah. The Clean Energy Fund has been really important, and particularly for those early stage companies. Some of those deals you talk about, you've got a really small company with technology and you've got utility engage, the State gets engaged. For the first time, they can get technology deployed, which probably would be ... Well, it might not happen at all with that, so the State through the Clean Energy Fund sprinkled some icing on the cake, so to speak. They're not paying for the whole thing, and there are partners that are in it as well.

Tom Ranken: 23:42 But it's been fantastic. Even in some cases where the technology hasn't worked out, the people that are involved rave about how much they've learned from it. You might be step one, if that one doesn't work, but you're clearly moving to step two and you're going to get there faster. That gives us a chance as a State to really get ahead of everybody else. We're doing stuff that other States can't do.

Ken Harvey: 24:03 Well, the Thomas Edison model is you just keep doing and learning.

Tom Ranken: 24:06 It's one thing and people criticize, I think, when the State or the federal government, or others get involved in things and their problems, companies go belly up. But any venture capitalists will tell you if the one deal out of 10 that funds everything else. You expect, if you're not taking some level of risk, well, you're going to have failures. You're not taking enough risk, and that's where we should be. We should be gambling on some things that have a chance to pay off big in the future.

Paul Pitkin: 24:31 Particularly when other regions are doing it.

Tom Ranken: 24:34 Mm-hmm (affirmative)-

Ken Harvey: 24:36 I am just so curious about that question and we touched on it a little earlier. I'm so curious about why this area seems to be willing to do that. What set of circumstances has come about that is allowing us? We're not Silicon Valley, we are our own version of that. I have a good friend who says that we are on the

culp of phase two of our path toward a second Silicon Valley, which scares the heck out. But I'm so curious on your perspective in working with these companies from the smallest idea to the very biggest in our region. What do you see as a commonality that creates this opportunity to innovate and take risks?

Tom Ranken: 25:28 There are two things that really come to my mind immediately. One is the underlying research capacity of the region is really outstanding. The difference between here in San Francisco is not that there are universities in San Francisco that are better than the University of Washington and the other research institutions, but they have more of them. We have world-class technology development in this region, stuff we should be very, very proud of. They tend to be within the limitations that exist within those organizations, and the bureaucracies and so forth.

Tom Ranken: 25:58 But they tend to be very interested in trying to get these technologies out and the impact on people, so that's extraordinary. The other thing is, like I said, I've lived here for a long time and the economy's changed a lot. I think Microsoft is a big, big deal. In the early '80s, it was Boeing and not much else. But all of a sudden, these little startup company came out of nowhere and had an enormous impact. Not only in terms of software and what they did, but you had people making a lot of money.

Tom Ranken: 26:28 You had the average person on the street owned some Microsoft stock, and that was doubling every few years. You had an employee base that had been there and done that. You had people that were involved in the company that went on and did other things as board members or investors. The whole innovation economy, the notion that you could start a company, and it's hard to do and granted, but you can be successful and really successful, was something I think that came out of that culture as affected a lot around here.

Paul Pitkin: 26:54 I was thinking the same thing. It's so different when you see something like a Microsoft and you know people who suddenly became a millionaire overnight because they had stock. Then it just makes you think about things in a different way.

Tom Ranken: 27:09 Yeah, I agree. I think prior to that, if you were to start a company in any field, people will be very, very skeptical. Once people saw live stock options and what happened, it was like, "I better get in this or it'll walk past me."

- Ken Harvey: 27:23 Okay. Tom, before we take a little break, I want to just ask you a question about the role of policy in what we've seen as relative success or just dependent success in terms of the advancement of Clean Technology in our region and around the world. The CleanTech Alliance puts a lot of energy into helping set policies around this, doesn't it?
- Tom Ranken: 27:55 We have, so things like the Clean Energy Fund. We are a business trade association, we have a large board and it's all over the map politically. We don't take positions on very many things, but when we do, we have a consensus that everybody thinks it's important. Issues having to do with innovation, with research, with the entrepreneurship, there's no controversy whatsoever. As a result of some of this research we've been doing internally on the barriers to get to scaling up new companies, I think we're starting to look at policy a little bit harder.
- Tom Ranken: 28:28 Clearly, they're big issues. If you're developing a product that might be used by consumers in the energy field, utilities are going to be part of that process. The regulations and what we as consumers demand out of utilities is very, very complicated. You get into policy really quick for lots and lots of the innovations that are coming out in that space. I think that's going to become more important as time goes on for us.
- Ken Harvey: 28:56 Is that one of the things that you think attracts members to the Alliance that-
- Tom Ranken: 29:03 Yeah. Our brand right now that we've worked very hard to develop is we listen to everybody. We don't have a position on nuclear power pro, or against if a terror power or a new scale, or some of the few ... We have three fusion companies in the State that are working on that technology; CT Fusion and Helion, and Zap. If they develop stuff that gets approved and make sense from a financial standpoint, that is fantastic. That's a big win. We're not forward or against it, but we're forward greasing the skids that allow those technologies to get developed because hopefully they'll change the world. Whether it's fusion or solar panels, or anything else.
- Ken Harvey: 29:45 Because they will change the world. That is a good note for us to take a short little break on. When we come back, we may go a little bit further with talking about CleanTech and CleanTech Alliance, but we're also going to explore some other sides to Tom Ranken. We'll be back in a second.

Speaker 2: 30:06 Want to get the latest business news and solid financial advice from the experts for free, you can. With your Sno-Isle Libraries accounts, library customers can download the latest news and advice from publications like Entrepreneur, Kiplinger's fast company and inc. You'll find feature stories around the business of technology, leadership innovation, the stock market, retirement planning and achieving financial success. All of that with a library card just waiting for you online at Sno-Isle Libraries.

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Ken Harvey: 31:07 All right. We're back with Tom Ranken. Tom is the outgoing president and CEO of the Washington CleanTech Alliance and we are delighted to have him join us in studio. Thanks again.

Tom Ranken: 31:17 Thank you.

Ken Harvey: 31:19 We've been talking a lot about some of the aspirations and achievements of CleanTech Alliance and it's work that has been making the Pacific Northwest a cleaner and safer place, or evergreen part of the country. But it seems to me that as we were talking about some of the member companies, and some of the work, and products and services that they provide, that really the applications for those products and services is really not just Pacific Northwest specific. It's really global; national, continental and global.

Tom Ranken: 32:02 Yeah. I've had a chance to do some traveling, and part of this job is to study missions in China and India. One thing I came back with is, the change in our energy utilization for example, is relatively slow. If you look decades back, we use a lot less energy for the same amount of input. Where the big changes are happening are in the development of the third world. Both the emergence in the middle class all around the world and the growth of the population is still way above what we're doing.

Tom Ranken: 32:33 I'm a big believer, if we can do things here that make rational decisions better, faster, cheaper, cleaner and safer in India or sub-Saharan Africa or China, then we really have changed the world. If there's, for example, battery storage combined with solar and the wind that you can install on a village in India that meets their criteria, it's the right economic decision, then you've changed the world.

- Paul Pitkin: 32:57 Well, doesn't that have some pretty profound climate change ramifications too because many of the third world countries are the ones that are really the highest, it seems, like the highest per capita producers of pollutants and other things that have been contributing to the concern around climate, right?
- Tom Ranken: 33:14 Yeah. In a lot of occasions, that's true. It's true and the developing world is too ... As well, the difference is the changes that are going on, the growth that's going on. If it makes economic sense in Delhi or a village in India, then it's going to make sense here too. The argument is, let's build those technologies, let's develop those technologies that make people make rational decisions that emit less carbon. One of the things that's true about carbon is it doesn't matter where it's admitted, whether it's in Seattle or China, or India, or anywhere else, it has the same implications.
- Tom Ranken: 33:48 We're not better off if we reduce our carbon emissions any more than the Japanese or the Chinese are, it's a global issue and not a local issue. At the end of the day, people make rational economic decisions. It's part of our job as a trade association to help make those cleaner decisions.
- Ken Harvey: 34:09 Well. Speaking of those cleaner decisions and maybe any connections to climate change. I actually became more aware of CleanTech Alliance because of a recent radio talk show host, talking about CleanTech Alliance and Cliff Mass in the same conversation around climate concerns. Essentially saying that The Cliff was seemed to be convinced that maybe there were some technological solutions that were on the way that might help mitigate some of those concerns. I listened to that on the way to work one day and thought, "Hey, I should to look into that more," and came across you and the CleanTech Alliance. Is Cliff right?
- Tom Ranken: 35:07 We hope so, and we should all hope that he's right. There are some amazing technologies that are being developed. We have three small fusion companies here in this region. If that works, and there are a lot of hurdles in financial and technical to get there, but they're making amazing progress and they're amazingly smart people.
- Ken Harvey: 35:28 But fusion there as in like a fusion energy generation or energy generation [crosstalk 00:35:34] fusion?
- Tom Ranken: 35:35 It take a little bit of seawater and you can power a city, it's just amazing stuff. It's a science fiction, right? But these guys believe they can do it and they're a lot smarter than I am. There are a

lot of if and buts between here and there, and there are multiple technologies and it's not just that by any means. But hopefully, those technologies will emerge in such a way that they make sense and people start using them, and that starts to change the world. If you can do that, then the whole notion of electrifying everything becomes much more feasible.

- Tom Ranken: 36:09 It'll make a whole lot more sense to buy electric cars as that technology evolves. This State, the big problem of course is transportation. If you can have an impact there, that would be huge.
- Ken Harvey: 36:21 Absolutely.
- Jim Hills: 36:22 We should back up and make sure that we tell our listeners who Cliff Mass is, who's University of Washington, atmospheric sciences professor. Often uses his blog to do weather forecasts and he's on the radio a bunch, and he's-
- Paul Pitkin: 36:38 And he's an author.
- Jim Hills: 36:38 And he's an author, so that's who this Cliff Mass is that we're talking about.
- Ken Harvey: 36:42 I had a question. It's the same one I was talking about? [crosstalk 00:36:45].
- Jim Hills: 36:46 That's awesome.
- Paul Pitkin: 36:47 We're getting good at this podcasting thing, this is great. I was curious about, I've heard about this and I've always thought it's got to be a pipe dream. Is anybody developing any companies, any researchers developing some idea of carbon removal?
- Tom Ranken: 37:03 Yeah. The whole idea of sequestration, that's something that a lot of people have been working on. I understand there's a BC-based company that's made some headlines on that, but sometimes it's simple. It's as simple as like farming techniques, to do it on a mass scale becomes a much bigger deal. But yeah, that's a technology that's emerging.
- Ken Harvey: 37:23 The sequestration is a really long word with lots of syllables in it. But accentuates as I understand, it's capturing the carbon so that it's reducing the amount of carbon dioxide going out into the environment.

Tom Ranken: 37:36 I suppose a tree is a sequestration technology, so it takes carbon from the air and it turns it into wood.

Ken Harvey: 37:43 It's a natural one, but we're looking at technologies that essentially kind of mimic that.

Tom Ranken: 37:49 Right, or just plant more trees.

Ken Harvey: 37:52 Well, that's actually, I think that was one of the things that I heard in that radio show that I thought, "Wow, that's a neat word with lots of syllables, I'm going to go and look at that as well." I'm glad, Paul, that you brought that up. Hey, I'm looking at the time and I wanted to make sure that we had an opportunity to explore some other sides of you. One of the things that during the break Jim mentioned, if it was okay to ask you about was your being a boy scout and then an Eagle Scout. You're nodding your head but the audience can't see that.

Tom Ranken: 38:28 Guilty as charged.

Ken Harvey: 38:29 So that's pretty neat.

Jim Hills: 38:30 When you're sitting around with a bunch of business guys and they say, "What are you, a boy scout?" You say yes, for real?

Tom Ranken: 38:37 No. I'm never shy about it. I usually have a boy scout pin on it or something. I went through the program in Oak Harbor and then with my father was in the Navy, we moved to the Persian Gulf and did it there. Then when my son turned 10, we got really engaged and to be very honest with you, it was more fun as an adult to go through the programs. I'm a big believer in how much it's helped kids and not the least, which is my son.

Ken Harvey: 38:59 Well, so am I. I remember it being a boy scout as a kid. It was a big deal and always looked up to Eagle Scouts. What was it that drove you from being boy scout to pursue being Eagle?

Tom Ranken: 39:12 Oh, as a kid, it was just more than anything else an expectation of my parents, but the notion that would be something that would-

Ken Harvey: 39:19 Mom and dad saying, "You will be an Eagle Scout."

Tom Ranken: 39:22 Well, they were very enthusiastic and encouraging. Then there was the college application thing, and all that kind of stuff. The thing that really amazes me even to this day, people say, "Well,

you're an Eagle Scout," as if something I did when I was 17. Is it something important? Yes, it is.

Paul Pitkin: 39:38 It impresses me.

Tom Ranken: 39:40 There you go. It was a long time ago.

Paul Pitkin: 39:43 I don't care how long ago it was.

Tom Ranken: 39:45 I once, when I was scout master, I was a scout master for about five years, and the kids would ask me to say a few words at their Eagle presentation. At one time, I thought that the theme of my talk was going to be, no Eagle scout has ever been convicted of a felony, that's not true. In fact, two Eagle scouts, I believe, were executed. Probably shouldn't say that on a podcast, but ...

Ken Harvey: 40:10 But that was not the path that you are on?

Tom Ranken: 40:13 I hope not.

Jim Hills: 40:15 Despite those few that got executed, are there some things that you take from scouting that you find still work for you today?

Tom Ranken: 40:23 When I was a kid, I thought it was about citizenship and camping skills, and so forth. As not an adult, I think it's about learning leadership and perseverance. Every one of those kids that may be Eagles, been on the program usually since they were Cub Scouts. So they spend over half their lives working on that goal. In sports, that's the same thing in some ways too that you learn, if you stick with something, even though you have a hard year or an injury, or your friends that we could get mad at or whatever. You stick with something for a long time, you persevere, you'll achieve great goals.

Ken Harvey: 40:55 Well and you've received, as I understand, some recognition? Say something about that.

Tom Ranken: 40:59 Yeah. One of the things I still do in addition to working with a troop is I do a fundraiser every year. We did our fundraiser yesterday and raised \$60,000 for our district.

Ken Harvey: 41:09 Fantastic.

Tom Ranken: 41:10 At the end of that, they announced that I'd been selected for the Silver Beaver Award, which is a big deal in scouting. I'm very, very pleased with that.

Ken Harvey: 41:17 Congratulations.

Tom Ranken: 41:18 Thank you.

Paul Pitkin: 41:18 Congratulations.

Tom Ranken: 41:18 Thank you.

Ken Harvey: 41:19 Not only an Eagle Scout, but also a musician, so a performer?

Tom Ranken: 41:26 I love my guitar.

Ken Harvey: 41:28 You have a band and I think the name of it is the Ranken File?

Tom Ranken: 41:32 That's right.

Ken Harvey: 41:33 So nice play on words. Tell us about the band.

Tom Ranken: 41:38 Oh, we have five members; three guitar players, including one that's my son. He's 27 and he's a great player, bass drums and three guitars. We play several bars in Seattle on a regular basis. Usually about twice a month, we're out and doing things. We're in West Seattle this Saturday and on Lopez Island, the following week.

Paul Pitkin: 41:58 Is that the Bogey?

Tom Ranken: 42:00 That is it, yeah.

Paul Pitkin: 42:01 Yeah. I saw it on your website.

Tom Ranken: 42:02 The famous Bogey Tavern, and the Lopez Island and Resort, follow me.

Ken Harvey: 42:08 Which instruments and what's your role in the band?

Tom Ranken: 42:11 Mostly, I'm the person that gets all the cats in the room at the same time. But I play lead guitar along ... All three guitar players are quite good so we share lead guitar duties, and two of us do most of the lead vocals.

Ken Harvey: 42:24 Fun. Do you play to perform or do you play to get them to dance, or both?

Tom Ranken: 42:30 To perform mostly. We like it when people dance but the places we play, people usually sit in the bar drinking and singing along.

Jim Hills: 42:39 What is the sweet spot of your playlist of the Ranken File playlist?

Tom Ranken: 42:44 We're having fun developing some original songs.

Jim Hills: 42:46 Oh, great.

Tom Ranken: 42:48 It's mostly classic rock, but we were doing about eight or nine original songs that are really fun to work on.

Paul Pitkin: 42:53 I saw on your website you had a set list, some stuff. It was very, look good, love life. Very broad and I did notice you guys, have you gone into the studio and recorded any of these songs or are you just letting out playing them?

Tom Ranken: 43:06 We have done that in the past, but not this band. We've not done that, and that's something that's on the list. In fact, when I leave my current job, I'm hoping to find some software and learn how to use it, and start to do some recording. That'd be a lot of fun.

Ken Harvey: 43:17 It's really fun. [crosstalk 00:43:18]

Paul Pitkin: 43:18 -frustrating at first, but it can be really fun.

Tom Ranken: 43:21 You're in a band, right Paul?

Paul Pitkin: 43:23 Oh, I'm in all sorts of things.

Tom Ranken: 43:25 You're a musician?

Paul Pitkin: 43:25 Yeah.

Tom Ranken: 43:26 And what do you do?

Paul Pitkin: 43:27 I play zing and I play guitar, and I play the bass, and write songs, but then also do covers and you know, all sorts of stuff.

Tom Ranken: 43:34 Ken, you're a musician also?

Ken Harvey: 43:36 Yes.

Tom Ranken: 43:37 Yes? Well, is that just a yes or what are you doing?

Ken Harvey: 43:41 Yes. I have been a musician and a songwriter, and a composer and play a few instruments. But-

Paul Pitkin: 43:48 This is a studio, right?

Tom Ranken: 43:53 That's all we need to-

Paul Pitkin: 43:53 Ken, did you bring your guitar too?

Ken Harvey: 43:54 I didn't.

Tom Ranken: 43:57 Next time.

Ken Harvey: 43:58 I'll direct this to Tom and to Paul. How do you know when you're performing, what is it you look for in the audience that tells you, "We're in the sweet spot?"

Paul Pitkin: 44:10 I know what I know what it looks like when they're not in the sweet spot. They're not in the room.

Tom Ranken: 44:15 They get up and leave, right?

Paul Pitkin: 44:19 Or you see them in there, like actually had their hands over their ears. Like a cover band that I've played with many times, we have a problem with volume. Yeah, so we've had people come up to us and say, "Can you turn it down to 11?" Then the drum roll who's really loud, he'll just say, "It's an acoustic instrument," so what's he supposed to do? Sometimes you'll see that, but then Tom, when people are ... There's a certain look, well, a lot of times, you'll hear if they're talking the whole all the time. That's another sign that it's not going well. They're talking over you. Then of course, the crickets between songs or just the singular, [single clap], it's another sign that things aren't going well.

Tom Ranken: 45:04 Well, once and only once, a long time ago, we were asked to play at networking event. Like you, it's a rock and roll band, yet we have drums. It's loud. A lot of people in the audience who were friends or business acquaintances, or whatever and they were fascinated for about three songs. It was a networking event. They were out at room networking after that. Okay, deaf and there seeing this done, back to work.

Paul Pitkin: 45:27 Yeah. A key to do a cover band gig is to make sure that you're not part of another event. I remember doing a relay race for cancer at some point, and it was just stupid. We were playing and everyone's running around the track. But if you can get people captive in the bar, and it's really important that they get drunk. The drunker they get, the better you sound.

Tom Ranken: 45:54 I always play bars that have some kind of a sale on pitchers.

Ken Harvey: 45:59 Yeah. That's a good place to play, free beer would be good.

Paul Pitkin: 46:03 I just mentioned, try not to do something where something else is going on, but I saw a video of your band playing at the ski slopes. What was that like, how did you play in subfreezing temperatures?

Tom Ranken: 46:14 Yeah. It was lousy, lousy weather. It was actually raining, about 30 degrees or so. It was just fun to play. We had a good time, the audience seemed to like it and it was a fundraiser for outdoors for all, which is a fantastic organization, gets wounded warriors and handicap kids out on the slopes. It was fabulous.

Ken Harvey: 46:33 Were you undercover?

Tom Ranken: 46:34 Yes.

Paul Pitkin: 46:34 Yeah. I just was thinking about when everything's wet. [inaudible 00:46:38] have cold, your fingers would get like that, would be hard to play but you pulled it off.

Tom Ranken: 46:43 Well, and the beer.

Ken Harvey: 46:43 Well, that's when you switch to the harmonica, right?

Tom Ranken: 46:48 Yeah. That's all these here.

Ken Harvey: 46:51 There was another instrument that was in the list that was showing, called the harmonic-

Tom Ranken: 46:56 Harmonium.

Ken Harvey: 46:57 What is a harmonium?

Tom Ranken: 46:59 Harmonium is a keyboard. It's not very big, maybe three feet, by one by one. It's a pump organ, so with one hand you pump it and the other hand, you play the regular keyboard. It sounds not unlike, it's kind of an Americana accordion kind of sound, although they're made in India. I love playing that thing. But it's one more piece of gear to lug around, so it's at my basement right now.

Paul Pitkin: 47:26 You were mentioning that you're going to have to haul your PA around, and I made a rule for cover gigs because I was only

singing. I'm like, "I'm not touching anybody's gear. I'm not moving anything because I hate moving gear around."

Tom Ranken: 47:41 Well, everybody hates moving gear. That's why my rule is, nobody's done until everybody's done. That's the guy with the PA, that's an important rule.

Paul Pitkin: 47:49 Yeah. Well, luckily I have a cousin that plays with me so I can be as awful as I'd need to get through it.

Ken Harvey: 47:56 Tom, I have a question here and I wanted to make sure we asked this in the remaining time. It says here that in 2015, in April, you visited Amsterdam. You and a colleague took a train to the Heineken experience.

Tom Ranken: 48:14 We did?

Ken Harvey: 48:14 Yeah. Do you recall that?

Tom Ranken: 48:18 Most of it. Interesting question, Ken.

Ken Harvey: 48:20 It's a museum, I guess that's for to Heineken beer.

Tom Ranken: 48:26 Yeah.

Ken Harvey: 48:28 What did you learn about the museum, the business, the brand?

Tom Ranken: 48:33 Well, I'm a home brewer, so I'm really interested in the whole science behind it and how they do it. The big thing I learned is the difference between what I do and what they do. Is for me, it's an art form, right? The last thing I brewed was a chocolate coconut stout with a little bit of peppermint in it. They don't do that. In fact in those places, they're all wearing white coats. What's important to them is every bottle tastes exactly the same as the first one that was brewed over 100 years ago. That's a technology play as opposed to an art form. That was the big thing I learned out of it.

Paul Pitkin: 49:09 How did you get into brewing beer, was it playing gigs?

Tom Ranken: 49:13 No. Mostly earlier in my career, I worked for Immunex, which was a biotech company. The way we manufacture drugs was basically brewing them. You take a genetic code, inserted into yeast and then you grow up the yeast. Then you get rid of everything that's not genetic coded and that's human drug.

Jim Hills: 49:31 That's incredible.

Paul Pitkin: 49:32 So you just apply the same concepts to brew beer?

Tom Ranken: 49:36 Yes. It is. Both cases, it's brewing. I've always been curious about that and about five years ago, I got the chance to try it for the first time and it's fun.

Ken Harvey: 49:46 Well, I'm looking again at the list of companies that have been touched by some of the Clean Energy Fund dollars of the State that had come about because of the work at CleanTech Alliance working with the State of Washington. I'm seeing companies like Oscilla Power, who was building a community scale wave energy conversion system. Another one, Battery Informatics, looking at next generation lithium ion battery management systems. Another one, the Zunum Aero. I think that's right developing the first commercial class hybrid aircraft. They're just a drop in the bucket of companies that sounds like that CleanTech Alliance has really helped move things forward for.

Tom Ranken: 50:38 Hopefully, some of those things are going to be big winners and change the world. You got to gamble on a lot of things because it's hard to get stuff developed, and it's even harder to get a commercially accepted.

Ken Harvey: 50:49 Well, was the investment worth it?

Tom Ranken: 50:50 I think it is. The challenges we're facing, like I said, we're a business trade association so we're all concerned about climate and we're all concerned about jobs. These things have a chance to really make a difference. Who knows what's going to work? That's part of the excitement of it. Sometimes you think you see things that you had no idea. Who would have bet on airplanes in Seattle in 1905? That'd be wacky. Who would've bet on software in 1970? That wacky ideas and yet out of nowhere, they changed the world. That's what we're trying to do. Hopefully some of those technologies will change the world, but it will fail. But with the one they win, they win big and they benefit all of us.

Ken Harvey: 51:33 We can learn from the ones that you-

Tom Ranken: 51:36 Absolutely. Some of the most important lessons are from failures, and that's true both in the business setting and a technical setting.

Ken Harvey: 51:44 Those are wise words spoken by an Eagle Scout-

Paul Pitkin: 51:47 Guitar player.

Jim Hills: 51:48 Beer brewer.

Ken Harvey: 51:49 And a home brewer. What's next for you?

Tom Ranken: 51:54 I'm definitely going to take a sabbatical for a number of months. I really want to work on the guitar playing. One of my instructors at a guitar playing seminar here was from Marysville and really taught me a lot of stuffs. I want to try to emulate him in a lot of things and just for personal satisfaction, get better at that. What emerges after that, is yet to be determined.

Ken Harvey: 52:16 Well, we appreciate the work that you've done and the things that you helped to achieve for our region, and making the world a better cleaner place.

Tom Ranken: 52:25 Thank you.

Ken Harvey: 52:26 Thank you for being a guest on our episode.

Tom Ranken: 52:28 Yeah. Really fascinating conversation. Thank you.

Ken Harvey: 52:31 Thank you.

Speaker 2: 52:33 When you give to the Sno-Isle Libraries Foundation, your gift generations. Your donation helps turn babies and young children into readers, turn students and first time entrepreneurs into successes, and helps maintain the lifelong learning of adults, seniors and our homebound neighbors. You can be part of the change you're looking for. Your onetime gift, monthly gift or memorial gift can make all the difference. Please consider investing in children, seniors, and others through the Sno-Isle Libraries Foundation today.

Ken Harvey: 53:12 Boy, I really appreciate Tom Ranken being part of the show. He is a very interesting guy, and the CleanTech Alliance has been doing some amazing things.

Paul Pitkin: 53:22 I appreciate the fact that he answers the questions and he really talks about him. He's not just telling you yes, no, he was really going into it, and it's such a fascinating subject. I have to admit, there was part of me that was just wanting to hear some hopeful answers about some of the challenges that we're facing with climate change. Actually, it makes me feel a little bit better that people are trying to figure some of these technologies out and how to install them in other places.

- Jim Hills: 53:52 As we were talking about what is in the water here that creates this opportunity for innovation and risk taking, and entrepreneurship, and he's an example of that himself. He mentioned that he was a scout in Oak Harbor. He's on his music career, he's coming back here to Marysville to learn from his mentor. He is a homegrown example of entrepreneurship and creating something that wasn't there before, and taking a risk about that.
- Paul Pitkin: 54:23 Having a totally open mind, to do those different things means that you're not afraid to do something and have it be lame or be boring, or not work out, or whatever. He's got an open mind and a curious mind.
- Jim Hills: 54:36 He said this a few times when we were talking about the CleanTech Alliance that the brand that they created is, we will listen to anyone. I thought, "What an interesting approach to basically a business group, we will listen to anybody?" I love that.
- Paul Pitkin: 54:55 I was struck by that too. What just a great mission.
- Ken Harvey: 55:00 Well, I wanted to just remind the audience, we were talking with Tom Ranken, who is the outgoing president and CEO of Washington CleanTech Alliance. If you want more information about that organization, which has 400 member firms and groups as part of their Alliance, you can go and you can find them at CleanTechAlliance.org online. You'll find some fascinating information about the work of their group and some of the member organizations who are doing some fascinating work to make the Pacific Northwest and the world a cleaner and safer place.
- Ken Harvey: 55:49 Thank you for listening to the Check It Out podcast. For free resources and materials connected to today's guest and topic, head over to the library's website and search for the word podcast. The library's website is Sno-Isle.org/podcast.