

INTERSTATE TURBINE ADVISORY COUNCIL

May 3, 2012

Operator: Hello, and thank you for standing by. All lines will be on listen-only mode until the question-and-answer portion. To ask your question, press star, then 1, on your phone. Today's call is being recorded. If you have any objections, you may disconnect.

I would like to introduce your host, Karin Sinclair. Please, begin.

Karin Sinclair: Well, thanks everybody for joining this bi-monthly webinar put on by the ASES Small Wind Division. Today we're going to have a presentation on the Interstate Turbine Advisory Council, given to us by Mark Mayhew, who is a project manager with the New York State Energy Research and Development Authority. And he's been employed with NYSERDA for about 16 years.

And he heads up the On-Site Wind Turbine Incentive Program. And the responsibilities of this position include reviewing and improving installer, turbine and customer incentive applications. He's responsible for molding the program into its current design. And he also serves on the board of directors of the Small Wind Certification Council, and was the recipient of the Wind Advocate Award in 2011 at the National Small Wind Conference. And NYSERDA is a charter member of ITAC.

So I'm going to turn this over to Mark. And again, thank you, Mark.

Mark Mayhew: Okay. Thank you, Karin. Before I start, I would like to point out that I'm just a guest presenter, in place of (Val Story) who couldn't be here today.

Usually when you hear the words bureaucrat and innovative they are not in the same sentence. The two words may get close together but there was always enough room for the word "not" to fit in between them. Today you will hear of an innovative bureaucratic solution.

If I can advance the slides. Whoops. That's not me. Okay. Sorry about that. Technical difficulties.

I'm going to tell you about the who, what and where of ITAC. The name, Interstate Turbine Advisory Council, ITAC, came into existence on July 11, 2011, and it beat out four other choices. Not extremely bad, but none that you could say as an acronym.

There are a couple of different versions on how ITAC got started, but since I'm the only one whose line is not muted, you will hear my account. The idea of ITAC started in Stevens Point, Wisconsin, where a bunch of bureaucrats started talking to each other and asking questions like, "How do you select turbines for your list? Oh, really? We look at it a little different. Wouldn't it be great if we all used the same list?" And being bureaucrats we formed a committee and started a weekly conference call to determine how to make the idea of a unified list a reality.

We needed an organization to be the home of the unified list of turbines and our first thought was to form our own not for profit limited liability corporation. But we quickly decided that, that would be too much work.

Next we looked for an organization that already existed. The one thing that we knew would be important was for the organization to have an acronym, after all we are bureaucrats. Since the concept started in Wisconsin we thought about the Midwest Renewable Energy Association, but the MREA, is a

regional organization and we needed a national flavor. AWEA or DWEA? No, they represent manufacturers and installers, and thus the list could be viewed as having a bias, which brought us to IRAC or CESA.

As you can easily see from this chart, the Clean Energy States Alliance was really the ideal choice. To quote (Val), "CESA is a nonprofit coalition of clean energy state funds and programs working collaboratively to develop and promote clean energy technologies and markets. CESA provides information sharing, technical assistance service and is a collaborative network coordinating multistate efforts. ITAC is an example of this collaborative effort, jump started by CESA in partnership with the states.

What is ITAC? If I'm allowed to make a movie reference, ITAC is the Wizard of Oz, created by CESA and the states to be the face of all the work that goes on behind the curtain. Creating ITAC allows the real work to happen behind the scenes and present the façade of impenetrability to the unknowing. ITAC also allows me the ability to punt when asked questions about providing funding for not-ready-for-primetime turbines. Don't ask me. Ask ITAC.

From our humble beginnings, we've grown to eight organizations and even eight is a large enough group to see democracy in action. It's actually great to have many interested parties and it's also great to have found a peer group that understands what I have to deal with on a day to day basis.

Okay. We are not advancing again.

Karin Sinclair: Mark, I think you can just click on the slides on the left.

Mark Mayhew: Oh, okay. All right, there we go. Sorry about that.

This is probably the most important slide in this presentation -- well the second most important, but you'll have to wait until the end for most important one. If ITAC accomplished nothing else but the exchange of information between programs, I would consider this effort a huge success. Each state program, on its own, does not have that much experience with each single turbine. When this process started, New York had funded only one Jacobs and Oregon and had not funded a single Bergey turbine. But as a group we funded close to a thousand turbines. We had the opportunity to learn from each other's mistakes and successes (evaluating equipment).

Each program had its own methods to evaluate turbines and we hired technical experts to help us decide which turbine should be fundable. This took away money that could have been used for installations and caused confusion in the marketplace since manufacturers had to submit slightly different applications to be improved in multiple states. A manufacturer might not even apply in a state if they thought the incentive pool was not large enough.

If a single turbine sheds its blades in Nevada, it's difficult to tell if it's a major or a minor problem. But if we hear the same story from Wisconsin, Minnesota and Massachusetts, now a pattern has developed. Issues like allowable minimal tower height and minimum wind speeds can also be addressed in a group setting. We have also had the opportunity to have intimate Q&A sessions with industry experts. By banding together we can present a unified voice.

I may be in a little different position than other states, and the fact that when I contact a manufacturer, I get a response in a timely manner. Now I'd like to think that it's because of my warm bubbly personality, but I know it's because my program has money. But now what happens in Oregon matters to all

states. Athos, Porthos, and Aramis said it best when they said, "One for all and all for one."

Why is it called the unified list? First and foremost, ITAC does not test or certify turbines. We do not want to replace the hard work of SWCC, Enertec NREL to name just a few organizations, but we want to build upon their efforts. When we decided on a concept we were searching for adjectives to describe the list and came up with recommended, eligible, qualified, but then we realized the simplicity of the unified list really said it all.

When trying to create a list we had to start somewhere, and we chose by combining the list of Energy Trust of Oregon, Wisconsin's Focus on Energy and NYSERDA. This created an initial list of 37 turbines. We submitted a list of questions to each of the manufacturers and when we received their responses we realized that either we didn't know how to ask questions or they didn't know how to respond. So we had the issue with second round of questions.

This exercise also allowed us to view confidential information and gave us a much clearer view and understanding of the stories we've heard throughout the industry. This truly allowed us to make informed decisions. Once again, something unheard of until now.

But as a part of this review we realized we had to limit the size of the turbines that would be reviewed, since the AWEA standard only applied to turbines with a rotor swept area up to 200 meters squared we decided on the same limit for our initial list. Approving midsized turbines would have to be tackled, but we decided to save that for another day.

The creation of this list could eliminate a barrier for states to offer an incentive program, thus the creation of the list may lead to more programs and hence more installations. Since the current default is to accept NYSERDA's or California's list, the creation of a list vetted by multiple parties should provide greater credentialing and easier acceptance of the list. I wish that this quote was mine, but I have to give credit here to Larry Sherwood.

When an organization uses a preexisting list they have no idea why those turbines were on the list. And the sad fact is that sometimes we didn't either. The unified list will be an important for end use customers, installers, manufacturers and clean energy programs because it provides a level and consistent playing field.

At some point, all turbines will have to be certified to the AWEA 9.1 standard. That time frame is dependent on where they stand in the certification process. For example, a turbine that is on the unified list and also has SWCC's conditional temporary certification will have 18 months to complete their certification from the time the conditional temporary status was granted, the same requirements posed by SWCC.

It is important to note, while certification verifies and reports the engineering acoustic power performance, characteristics of the turbine; it does not examine operational history, consumer experience, dealer issues, or the duration or quality of the warranty. We wanted to take our review one step further than certification.

In the midsized world, we don't want to be in the lead, and I feel comfortable in saying that since NYSERDA has the only midsized turbine requirements in the states. And hopefully we can build on that and the work that our friends across the pond have developed going towards international guidelines.

And now I present the inaugural seven. When we started, we had a conversation with Mick Sagrillo and he had a list of seven turbines that he considered worthy. These are not the same seven, but I thought it was amazing that there were seven on both lists. This list can be found on the ITAC Web site and the list also includes the AWEA rated power, rotor diameter and the manufacturer's Web site address.

Just like the certification requirements of SWCC and Enertec, manufacturers must advise ITAC of any significant changes to design or problems encountered in the field to maintain a good standing. ITAC's requirements to remain in good standing are also posted on our Web site.

Unfortunately, developing initial lists does not end our work assistant. It's only the beginning. We will be accepting applications on a first come, first serve basis and will be revealing approving and listing them accordingly, with the understanding that we each have day jobs and must fit this review into our already, overbooked schedule.

And interesting point was made at the International Small Wind Association of Testers Conference where it was stated that ITAC can influence the future path of testing and certification by what we require to be eligible for the unified list. I never realized the potential power we could wield and I promise we will use this power only for good. Hopefully I will run out of slides before I have to address the mid-turbine review.

By now I'm sure you've been asking yourself, "How can I get involved?" But if you're not involved in incentive program you can't be directly involved. However, there was always an opportunity to be tangentially involved since

we're always looking for talented individuals looking to share their knowledge.

I recently was asked if a manufacturer increases the length of the blades on a NYSERDA eligible turbine should it still remain eligible for funding. I knew what my gut reaction would be, but before I responded I asked a few industry leaders their opinions. Six out of seven replied very quickly, which first made me feel great and also I'll confront my thoughts that it would not be the same. But now I could make a decision and set a precedent based on industry feedback and not just my own thoughts.

There are quite a few states, territories and commonwealths with wind incentive programs. If you know of a program administrator who is not already involved in ITAC, please take a moment and tell them of the wonderful things we are doing. One of ITAC's greatest tests will be getting more of them to join the fold. Hopefully the creation of the first unified list will help.

And finally, the most important slide and the slide that we've all been waiting for, what I like best about giving this presentation is the ability to say and for more information, contact (Val Story). Thank you very much for your time. And I will take any questions that people have at this time.

Operator: Thank you.

At this time, if you would like to ask your question, please press star, then 1, on your phone. You will be announced prior to asking question. To withdraw your question press star, 2. Once again, please press star, then 1, on your phone at this time. Make sure your mute button is turned off to record your name. One moment, please.

One moment, there is a question coming in.

We have a question from (Heather Ruby). Your line is open.

(Heather Ruby): Thank you.

And thanks, Mark. That was a really good presentation. I really appreciate you taking the time to do this today. So looking at the initial list, I guess my question is on turbines, well you kind of touched on this, but turbines that have changed or that may be changing from when they did their original testing how is ITAC going to handle that when it comes to their power rating? Because a lot of times, you know, that is used for determining the level of an incentive. So the one I'm most curious about is the Xeres because they have an SR on the model name. And my understanding is that the power curve was tested when it was just the 442. So how have you guys talked about handling that?

Mark Mayhew: Okay. Well I guess what we really look for is the testing and certification bodies. With this we've received information from Enertec about their review of that turbine. And I guess based on that information we felt comfortable, well based on that and many other things, of including this on the list. We're really looking for, you know, again, we will not be doing the testing, so in this case we're looking for what Enertec has provided and that would be the information that we would be using moving forward with the power curves.

(Heather Ruby): Okay, great. Thank you.

Mark Mayhew: You're welcome.

Operator: At this time, there are no further questions.

Karin Sinclair: This is Karin. I have a question. So you started with the three lists, NYSERDA, Energy Trust of Oregon, Focus on Energy and there were 37 discrete turbines on those three lists. And after the assessment you ended up with 7.

Mark Mayhew: Right.

Karin Sinclair: So does that mean those 30 turbines are no longer on eligibility lists in those three states?

Mark Mayhew: (No). Okay, first I have to say when we started with the 37 that included turbines of all different sizes. So once we weeded out and came down to turbines that fit under AWEA 9.1, we then had 21 different turbines. So I guess those other 16 are still out there in states. For example, NYSERDA has a list of eligible turbines that are greater than a swept area of 200 meters squared. So from NYSERDA's standpoint, we said we were to except ITAC to the list for all turbines that are list included. So yes, there are turbines that used to be on NYSERDA's list that are no longer eligible for NYSERDA funding, because ITAC decided that they would not be on the ITAC unified list.

Karin Sinclair: So I guess, just another follow-up on that question. So for those turbines that are no longer at least on NYSERDA's list, is there some place where the consumer or other states who might have an old list and they were using NYSERDA's list, to go to see that some justification as to why those turbines are no longer on the list?

Mark Mayhew: No. NYSERDA's webpage has been updated saying that we will be using the ITAC list. But we did not feel it was appropriate to make any comments regarding turbines that ITAC did not choose to include on their list.

It's one of those slippery slopes. And I know it's something that everybody wrestles with. And ITAC does have the disclaimer that just because a turbine is not on the list does not mean that it is in anyway inferior. It's just that insufficient information was presented to approve it.

Karin Sinclair: Yes, I understand. That makes sense. I'm just a little curious about other states. Well, something that we've experienced is that turbines that are in the process of being tested. NREL, for example, will use the basis of that as a justification for getting credibility. So we also have that slippery slope that you're talking about. But we post the data that was a result of that testing, so the third party, the consumer, whoever, can go to those data and figure out why it doesn't have an SWCC certification, for example. (That's all).

Mark Mayhew: Yes, like you said, it is a challenge and I guess since we viewed a lot of confidential information and making determinations, we felt it wasn't appropriate to say anything about turbines that were not considered, and just announced the ones that, you know, the positive and not the negative.

Now I can say that each state has different, like I say, although NYSERDA has already accepted the ITAC list, not every state has, for example, with California. They have to do everything through legislation. So until the state legislature approves of this change they have to go by their existing standards.

Operator: Mr. Mayhew there are further questions over the phone if you'd like to take them.

Mark Mayhew: Yes.

Operator: Thank you.

Brent Summerville, your line is open.

Brent Summerville: Hello, Mark. Good job.

Mark Mayhew: Thank you.

Brent Summerville: Unfortunately, (Val) is not there to take these questions, so it looks like they're going to you. And basically I'm looking through the ITAC requirements on the CESA webpage and, you know, as a certification body, manufacturers want to know what they need to do to be certified. So what do you say when manufacturers ask you, "What do we need to do to be on the ITAC list?" I see that they either need to be certified or supply some other information. But what are some reasons why folks would not be on the list, you know? What's the short list of manufacturers? What do they need to do to be ITAC listed?

Mark Mayhew: Well, I guess what we're ultimately looking for is turbines that are certified. That would be the cleanest approach. And I don't think it's on the Web site yet, but at some point it'll be that, that will be the only way that you can become on to the list.

Some of the other things we look at is what's their training program they have for installers, what their warranty is. I believe ITAC says that you must at least offer a five year warranty.

Brent Summerville: (Yes), it does.

Mark Mayhew: So, you know, I guess those are some of the things that we look at that's... Oh, we also look at representation in the United States. We had one manufacturer who they basically had no representation in the state. You know, they've had no turbines installed in North America and they had not factory or dealers in the United States. So we thought that was kind of important to be on the list, that you at least have people that can install and service these turbines.

Brent Summerville: Thanks.

Mark Mayhew: You're welcome.

Operator: Again, for you question, press star, then 1.

There is another question. They did not record their name, but if you did have a question, your line is open. Please check your mute button.

There is no response and there are no further questions.

Karin Sinclair: This is Karin again. Then I have another question. I know that the current list is geared towards, are we (a standard on meters squared). But do we have an idea of a timeline for turbines that are larger than that?

Mark Mayhew: We don't. It's the next major item on our agenda. I mean as strange as it may sound, it was... Well, I guess two things. One is the fact, if you looked at this whole process and whole concept, started less than a year ago. So in bureaucratic terms, to come this far in that short of time frame, by some, would be seen as monumental.

We want to get it right when we go to the midsized turbines. You know, it would be easy to set a bar. We could say you have to be type-certified to IEC standards. And that would be great, but then there would be absolutely no turbines on the list. So the challenge is, is coming up with a criteria that we can feel comfortable with and still have something that (can be met) by the manufacturer. We're currently in discussion with the manufacturer's groups, with DWEA. Our friends, like Alistair MacKinnon is working guidelines, you know, from an international standpoint. We think it would be great if we could be a part of just one international guidelines. I don't think that's going to happen quickly.

A part of the issue, I guess, with looking at larger turbines is that a number of the states do not have funding for larger turbines, and that's kind of limiting factor as we try to move forward. You know, I certainly, since NYSERDA can fund up to 2-megawatt machines, I am certainly pushing to have larger machines included. But at this point, I unfortunately do not have a time frame.

Karin Sinclair: Thank you.

Operator: There is another question over the phone, but they did not record their name. Your line is open. Please check your mute button.

Thank you. There is no response.

(Heather Ruby), your line is open.

(Heather Ruby): Oh, hello. Yes, so I was just comparing the ITAC list SWCC applicant list, one thing I'm curious about, you did mention the conditional temporary certification. But if a turbine has been certified under MCS, for example, the Kingspan Renewables, that's what I'm thinking about, would they be eligible

to be on the list with that status? You know, that was previously certified under a different name, called Proven. And I'm just wondering if they had been on the list of one of those other states, if that would be, you know, able to be on your list.

Mark Mayhew: Again, since we're really looking at American programs we really want people that are certified to the AWEA standard. We decided that MCS is not the equivalent of AWEA 9.1. And again, if Kingspan applied, we would certainly review it. Yes, I don't really have an answer as I cannot say whether they would be accepted on the list or not.

(Heather Ruby): Okay, but by September, either way, September 30th, they would need to have their conditional temporary certification status, is that what the policy is?

Mark Mayhew: Yes, well when did they apply to SWCC? I'm not sure of this.

(Heather Ruby): Right. So they're listed as a applicant on the SWCC Web site but they don't have their conditional temporary status yet. They just have that they are certified by MCS.

Mark Mayhew: Okay. If they get their conditional status under SWCC, then that would start the clock ticking on their 18 months for full certification. And ITAC would go by the same requirements that SWCC has laid out.

(Heather Ruby): Okay, great.

Operator: Currently, there are no further questions over the phone.

Karin Sinclair: So this is Karin. I have another question. Do you have turbines that are in the queue for consideration of being added to this list, and if so, how many?

Mark Mayhew: There's three turbines that I guess I would say that would be in the queue. Two of them were a part of the initial group that we were reviewing and we could not come to a decision on those. So we're still in the process of collecting additional information, but we didn't want to hold up our initial presentation of the list, just because we couldn't decide two of them. There's another one that's a new turbine and we actually haven't received official application from them but we expect it soon. And then that would go through our review processes, as soon as it's appropriate to do so.

Karin Sinclair: Okay, great. So is this turbine, I mean is this list a living document in the sense that it is updated as soon as a new turbine can be added or is it timed, like every six months or whatever?

Mark Mayhew: Yes, we originally said it was going to be every six months, but in further discussions and actually comments that we've got from the industry, we've decided to make updates as soon as feasible. So yes, if a new turbine is accepted by ITAC, as soon as the Web site can be update it will be. So unless that process gets truly burdensome, we will try to do things as timely as possible and have it going on, on a rolling ongoing basis.

Karin Sinclair: Great. So I guess, do we have any other questions?

Operator: Currently, no questions over the phone.

Karin Sinclair: Okay. Well I guess we can conclude this webinar. I want to thank the participants, of course, in particular, Mark, for stepping in and giving us an excellent presentation on the status of ITAC. And just want to remind folks that we do have bi-monthly webinars, so the next one is July 12th. We're going to skip the Fourth of July week just because of the holiday and move it

to July 12th. And the topic will be predicted versus measured wind speeds at distributed turbine sites. So I think that one will be a very interesting topic. Hopefully, you'll all be interested in joining that.

And with that I guess I'll just say thank you all. And for those of you who are staying on for the business meeting, please stay on.

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