

**Conservation Commission Meeting December 12, 2018
Town Room, Town Hall**

7:30 PM Notice of Intent – Charles Kovacic/Direct Energy Solar for installation of a solar array and associated access roads, utility poles, transformer pad, and fencing within Riverfront, Bordering Land Subject to Flooding, and buffer zone to Bordering Vegetated Wetlands at 191 West Pomeroy Lane (Map 19D, Parcel 10).

Angus opened the hearing, the applicant provided proof of abutter notification. Angus stated this is the first time the Commission has heard a presentation on this project. The applicant presented informally to the Commission a month or so ago, but this is the first formal discussion of the project. Doug Telepman and Charles Kovacic, Direct Energy Solar, and Alex Patterson, ESS Group introduced the project. Telepman stated they are proposing a 5.5 MW solar array at 191 W Pomeroy Lane, location of Hickory Ridge Golf Course. They are working with and representing tonight Applied Golf, the owners of Hickory Ridge.

Patterson stated the property is 150 acres and the proposed project is about 25 acres. The Fort River flows through the center of the site, the arrays are located on the north side of the river. The western array is about 13 acres and the eastern array is about 10 acres. The other components of the project are two crushed stone access roads, the western starts off W Pomeroy and the eastern comes out of the clubhouse parking lot. They both cross existing bridges over the Fort River, they don't expect to have to improve or alter the bridges as part of this project. There are no new crossings proposed with this project. The arrays are sighted to be outside any 100 ft buffer zone to a wetland area and the 200 ft Riverfront. The access roads are partially located within Riverfront and buffer zone. Patterson pointed out the locations of the project features on the overhead map. He stated the two arrays will be connected by an overhead power line with 10-12 utility poles. The poles have been sited to be outside the 30 ft setback from two intermittent streams. Fair asked for the buffer zones to be pointed out on the plan.

Angus asked Patterson to discuss other regulatory filings and the performance standards for work in resource areas. Patterson stated an ENF has been filed with MEPA, the triggers that required that were impacts to Riverfront and Bordering Land Subject to Flooding as well as work in endangered species areas. He expects a response from MEPA in December/January. The project also requires review by the Natural Heritage & Endangered Species Program (NHESP), almost all of the site is mapped for priority and estimated species. They have communicated with NHESP who said there are four listed species mapped for the site, three freshwater mussels and the wood turtle. The NOI includes a wood turtle management plan, they will continue to work with NHESP on what they require. The project will also require a special permit from the Amherst Zoning Board of Appeals, that application has been filed.

They expect to have their first meeting with the ZBA in January.

Patterson stated the project has been designed to avoid resource areas as best as possible. Resource areas that will be impacted by the project include Bordering Land Subject to Flooding (BLSF) and Riverfront. He showed the 100 year flood zone on the overhead plan. He stated the floodzone line is based on FEMA data, however, they used the most recent town study to refine the line. Loss of flood storage would be from the fence posts, solar array posts, utility poles, and gravel roads. The net fill for the project is 1.1 cubic yards. The installation of the roads includes approximately 33 cubic yards of cut. So, there will be an increase in flood storage capacity. Patterson showed where the access roads go through Riverfront. He stated there is a limited project provision in the WPA allowing for construction of access roads

through resource areas to upland areas for renewable energy projects. Because the Fort River runs through the middle of the entire site it's not possible access the northern portion of the site without impacting Riverfront. Impacts to Riverfront for the project total about 0.7 acres. That area is mostly golf course turf.

Angus asked if the applicant had seen the MADEP comments? Patterson said yes. Angus said she is confused about BLSF delineation. She asked if there was a flood zone elevation determined for the site? Patterson replied yes, BLSF ranges across the site from 150-153 ft above MSL. He said the plan shows the FEMA 100yr floodzone line, but they used Amherst's recent flood study data, which included some cross sections over the Fort River on the property, to determine a more precise location of BLSF for the cut and fill work of the project. Angus said she would like the narrative, plans, and calcs to all match so it's clearer. Angus asked how they determined BLSF areas significant to wildlife? Do you have the 10yr storm figured out or did you do a blanket wildlife study for the whole site? Patterson said they did a wildlife study for those portions of the site proposed for development under the project. Angus do you have a response to MADEP's comment about applying under Riverfront redevelopment vs Limited Project? She stated you do need to comply with the regs to the extent practicable. Patterson said hasn't prepared a response yet, but they can prepare a narrative showing how they comply with the Riverfront standard. Angus restated if you can comply with the Riverfront regs you must, you can only seek the Limited Project relief if you can't comply.

Willson stated at today's site visit it was recommended to the applicant to utilize the existing maintenance shed road for access to the eastern array instead of the proposed road from the parking lot because that would reduce resource area impacts. Patterson said they will look into that. He showed the Commission where that road is on the overhead. Angus asked about using the cart path just passed the maintenance shed to connect to the bridge. Patterson said they would still need to improve the cart path. Angus said it's still much less impact to Riverfront. Willson asked if the applicant had information on how safe the bridges are for construction and emergency vehicles. Kovacic responded at this time we don't have stamped design drawings for the bridges, assuming the bridges pass an engineering inspection the Fire Dept has said they only need an ambulance and brush truck to be able to get over. Willson asked if we would eventually see the engineering review? Kovacic said yes it will be part of the next package submitted.

Angus asked how are they calculating only 1.2 cubic yards of compensatory storage? Patterson said they can provide those calculations, it includes the volumes from the fence posts, utility poles, and road cut and fill. She asked where is the excavated soil from road going? Patterson said we can use it on site. Angus said show us where on a plan it's going. Willson asked if the northeast section of the eastern array is just going to be graded or is soil being removed? Patterson showed the area on the overhead, he said he can provide the numbers for what's being cut at that location. Willson asked how they're actually gaining the 74 cubic yards of flood storage, is it because the roads go through hills? Patterson said, yes, there are areas where hills will be leveled off. Angus said the presentation needs to be easier to understand.

Butler stated he agrees they need to look at using the maintenance shed road access because it will reduce Riverfront impacts. He asked if the current bridges are adequate for current river flows, is there an opportunity to improve them for the health of the river. Patterson said if we can prove that they are safe for vehicles he doesn't think they will propose to improve them. He added whether the culvert at Muddy Brook is sized adequately is not something they looked at. Butler said if the bridges are underbuilt it's a threat to their future use for the project, and it may impact the endangered species (mussels) in the river. Angus stated it's hard for the Commission to ask for improvements to other areas of the site not included in the proposed

project work. Telepman stated it sounds like they should redesign the plan to use the existing maintenance shed road, then won't have to provide alternatives analysis of currently proposed road. Angus said we are asking you to take another look at alternatives that are less impactful. Telepman said they will look at the numbers and change road locations if impacts are less, or show calcs if they are more.

Fair stated if the bridges are being used for larger equipment through this project the wear and tear on them could impact the river. Telepman said primary use of the bridges will only be during construction, use during operation of the solar array for maintenance is very minimal. Angus said 99% of our concerns are for during construction. She asked if applicant is complying with Wood Turtle timing restrictions? Patterson said they are working with NHESP to figure that out.

Brooks stated the resource areas and the work areas (fence line) need to be flagged in the field. He added the erosion control should be in the plans. Willson stated they submitted erosion control plan sheets showing erosion control location. Angus asked where turtle protection mitigation area is, Willson showed her the plan. Willson suggested the Commission think about areas they might want to have a third party review of the delineation. Willson showed pictures on the overhead from the site visit. Willson stated the delineation only includes Bank along the Fort River with no associated BVW. She is concerned about the areas near the bridges where work may be done that they have the correct delineation. She suggested the Commission ask the applicant to take another look at those areas. Patterson said yes, they will look at those areas again for BVW.

Allen stated the southern portion of the western access road goes through an area that floods often. He said it may be flooded during construction. Patterson said they could shift the western access road to the west to avoid the wettest area. Brooks asked how will the flooding affect the road once they are built. Patterson said they can look at ways to stabilize the roads for flooding. Butler asked how high will the fence be for critters? Telepman said 8 inches. Butler asked what is the treatment under the array going to be, good for critters? Kovacic said it's a slow growth seed mix that will only need to be mowed twice a year. Angus stated we will need more information on the seed mix and will need an O&M Plan.

Willson asked if the 16 acres proposed for turtle habitat under NHESP is already set aside by owner for permanent protection? Patterson said it's an area along the northern bank of the Fort River, that will be maintained for early meadow habitat. Angus asked if that area is in the leased area for the project? Telepman said there is no lease, the current owner will continue to own the land. Butler stated many perches will be taken down, any plans to install any? Telepman said no, except for new utility poles. Brooks added can you list the number of trees and their species being removed. Patterson said yes, that will be in the next package. Angus asked about impacts to wildlife. Patterson responded the majority of the project is in improved areas such as fairways and sandpits. He added the project could have a net improvement for wildlife with the creation of meadow areas under the arrays and the improved areas along the river. Stopping the use of fertilizer and other inorganic lawn treatments. Angus asked if the turtle habitat area will be in permanent protection, has that been asked for by NHESP? Patterson said no, they are still working with NHESP.

Public comment:

John Hite - Is a member of Hickory Ridge, it is a wonderful asset to the community it was designed by Jeff Hornish and Amherst resident and state and national renowned golf course designers. The town will be losing a recreational resource, and an area used by a variety of wildlife. Hawks, deer, fox, heron all coexist with golfers and he'd like to see their use of the area continue not be interrupted by solar panels and fencing. Losing 80 trees that hawks use.

He's concerned about the bridge to the western array, it is not abutted properly, travel over the bridge will include heavy equipment carrying solar panels. He suggest accessing the site from the north through Mill Valley Estates. He's also concerned with what will happen with the remainder of the land, will the Town obtain it.

John Boothroyd - He provided a letter for the Commission. He stated US land law states that property owners don't own the waterways up to the high water mark. The 100-yr floodline is very controversial in Amherst. Guidelines say this board should say whether the wetland line is correct. This board should be referring to the 1969 USGS map that shows the streams and rivers as they should be, it defines the Connecticut River watershed. The golf course floods instantly during much of the year. The Plum Brook has been redirected and cut off as part of the building of this golf course. Golf course did provide open area for wildlife, the solar field with fencing will limit wildlife and public access. Put up food trees not ugly chain link fence. This board can deny the project if they want. The Fort River has been destroyed, used to have oxbows and brook trout.

Bruce Parkin - Hickory Ridge member. He thinks the western access road is in the floodplain. The current owner failed because he didn't improve or even take care of the course. The application says if the solar isn't built the property will still cease to be a golf course, however, the owner continues to maintain the greens and fairways, he's told the staff they still have a job next year.

Jen Hoffman - Owns 12.5 acres that abuts the golf course, she has live there 50 years. She says the floods have increased in the last few years. Other thing that has changed over the years is beavers blocking and changing the pattern of the river. She is concerned about putting anything along the river. Angus added she and the Commission are concerned also, for both construction phase and long term flooding and the solar array. Boothroyd asked how the panels would be cleaned. Telepman stated the rain cleans the panels, they don't require any cleaning.

Deb Wright - They've enjoyed having the golf course across the road from them, it's a quiet game and provides nice views. Will the lower tax rate go up once the land is being used for solar, and will the town benefit from the profit from the energy sales? Telepman stated the tax rate will increase once the property is removed from recreational use and there will be penalty to pay for taking it out of recreational use. The energy will go back into the grid for Amherst residents to use. Wright asked what is the next step? Angus said we're asking for additional information and to come back. The Commission is waiting to hear about Endangered Species. The applicant needs to go before the ZBA and Planning Board. Telepman stated the property owner will be hosting an informational session at the club for the public to ask questions.

Gerald Jones - Saw the equipment needed for the Pulpit Hill solar project. Doesn't think the bridges can hold up the equipment needed to build the arrays. Asked who is in charge of the bridges and roads determining if they are adequate to carry the needed equipment? Angus stated one difference is the amount of tree clearing done at Pulpit Hill, they needed big equipment. She asked Ziomek if anyone in town is in charge of making that determination on private land. Ziomek said the applicant needs to talk to the fire dept., and DPW. Telepman said their plan is to have a licensed structural engineer look at both bridges and determine the load capacity. Angus said the Commission would also need dimensions of the bridges. Angus asked if the plans will change because of the DPW sewer line? Kovacic stated the footprint of the fence line will change. Kovacic showed on the plans the line and easement. He stated they plan to widen the space between two of the array lines and put in gates so DPW can access the line if needed.

Ken Hoffman - Concerned about construction in the spring, he remembers substantial flooding of the golf course in the spring. He said you can see the underside of the bridges when the river freezes. The western bridge looks disturbing with rust and pieces falling off. Angus said she agrees that construction period erosion is a concern.

Rick Coleman - He asked what happens if construction starts and then SMART program funding is halted. Telepman stated work will not commence on the project until all SMART program paper work is in place. Angus asked if they have a decommissioning plan required under land use permits? Patterson stated they submitted a decommissioning plan with the ZBA application. Angus added you can't apply for SMART until you have all your permitting. Telepman stated they will know relatively soon whether the project is receiving an award under SMART program, in a couple of months. Coleman asked if they will have another chance to comment. Angus replied this hearing will be continued, there will be other public hearings, however, you won't get notification in the mail again, you must watch the agendas. There will also be public meetings with Planning and ZBA. Coleman stated we've had more hurricanes and tornadoes lately, what happens when the panels are damaged. Telepman stated the structures must meet building codes they are made to withstand bad weather. If damaged they will be replaced. Coleman asked if there would be a chemical impact? Telepman stated there are chemicals with metals for conducting electricity similar to your cell phone that are only an issue if allowed to sit on the ground a long time. Angus asked if Direct Energy is doing the long term O&M on the system. Telepman said yes, they warranty the system. Ziomek asked applicant to explain their role for the public. Telepman stated they design, build, and maintain the system for the system owner. They warranty the system, and guarantee the output of the system, so monitor it remotely for inefficiencies and fix the problem so it can be running at full capacity. Angus asked who owns site maintenance like vegetation and road maintenance? Telepman said the property owner, but they would assist for anything that has to do with the system. Angus said Commission needs to see maintenance plan for site conditions.

Ziomek said the Town has been talking to the owner about what will happen to the remaining portions of the site. He stated it's unclear how the 16 acres will be improved for turtle habitat, will it just be left to grow in or will it be replanted? Patterson said there will be management to create a low growing, herbaceous, native cover, scrub shrub community. Including native seed mix and some shrub planting. NHESP suggested during discussions with them.

John Boothroyd - What panel efficiency are you using? Telepman answered 20% which is one of the more efficient types.

Applicant to do list:

1. Respond to MADEP comments in writing - if can comply with Riverfront standards address how your meeting them and don't apply as a Limited Project. Ask Willson for guidance on mitigation ideas.
2. Stake out limit of fence and roadways in the field.
3. Better address alternatives.
4. Revisit delineation by bridges.
5. Address stabilization of roadway material after construction.
6. Provide details on seed mix.
7. Provide O&M Plan
8. Provide more details on plans of BLSF delineation
9. Provide additional details on cut and fill areas in BLSF
10. Consider mitigation for loss of trees and perch locations
11. Address stabilization/erosion control during construction that might occur during flooding, provide details & suggested solutions.

Brooks moved and Butler seconded. Commission VOTED (6-0-0) to continue the hearing until January 9, 2019 at 7:30pm..

**Conservation Commission Meeting January 9, 2019
Town Room, Amherst Town Hall**

7:35 PM Notice of Intent (cont'd from 12/12/18 mtg) – Charles Kovacic/Direct Energy Solar for installation of a solar array and associated access roads, utility poles, transformer pad, and fencing within Riverfront, Bordering Land Subject to Flooding, and buffer zone to Bordering Vegetated Wetlands at 191 West Pomeroy Lane (Map 19D, Parcel 10).
Willson stated applicant has requested to continue hearing to 1/23/19 meeting.

**Conservation Commission Meeting January 23, 2019
Town Room, Amherst Town Hall**

7:45 PM Notice of Intent (cont'd from 1-9-19 mtg) - Charles Kovacic/Direct Energy Solar for installation of a solar array and associated access roads, utility poles, transformer pad, and fencing within Riverfront, Bordering Land Subject to Flooding, and buffer zone to Bordering Vegetated Wetlands at 191 West Pomeroy Lane (Map 19D, Parcel 10).

Alex Patterson presented. He stated they met with the Town Tree Warden, Alan Snow, and the Planning Board. All the trees to be taken down have been inventoried, there is approximately 200. A bridge structural study is underway, the field work is complete and they are waiting on the analysis, hopefully have the report next week. He stated they are changing the design so that the eastern access road is the existing maintenance building driveway. Patterson stated they determined that the base flood elevation is 140-142 feet. He stated they added a compensatory storage area near the southwest corner of the eastern solar array. NOI revisions also include adding a list of construction vehicles, a new alternatives analysis, and additional erosion control. They changed the NOI so that it is no longer a limited project, they are complying with the Riverfront Redevelopment performance standards.

Willson to ask DEP about delineating fairways. Clark asked how the access roads will be built with the amount of flooding the site gets. Patterson stated no construction will take place when there is flooding. They will provide more information on the bridge study and design at the next meeting. Patterson stated the Commission may visit the site whenever they want for a site visit. Michael Burtwhistle, club member, stated he's been a member for 20 years and the river floods into the southwestern area where the western access road is proposed every spring and now fall too. This is less problematic on the eastern side. He asked if the gates to the arrays will block walking the land for pedestrians?

Jim Wright, neighbor, presented photos of the gold course flooded to the Commission.

Tom Joyce, club member, stated he joined the club in 1972 and it floods. He stated the electric line poles along the western access road will be sitting in water, and the new gravel access roads will redirect the water to places we might not like it to go.

Butler moved and Clark seconded. Commission VOTED (4-0-1, Fair abstained) to continue the public hearing until February 13 at 8:00pm. The applicant agreed to the continuance.

**Conservation Commission Meeting February 13, 2019
Town Room, Amherst Town Hall**

8:00 PM Notice of Intent (cont'd from 1-23-19 mtg) - Charles Kovacic/Direct Energy Solar for installation of a solar array and associated access roads, utility poles, transformer pad, and fencing within Riverfront, Bordering Land Subject to Flooding, and buffer zone to Bordering Vegetated Wetlands at 191 West Pomeroy Lane (Map 19D, Parcel 10).

Willson stated the applicant has requested a continuance of the hearing.

Conservation Commission Meeting March 27, 2019 Town Room, Amherst Town Hall

8:00 PM Notice of Intent (cont'd from 3-13-19) - Charles Kovacic/Direct Energy Solar for installation of a solar array and associated access roads, utility poles, transformer pad, and fencing within Riverfront, Bordering Land Subject to Flooding, and buffer zone to Bordering Vegetated Wetlands at 191 West Pomeroy Lane (Map 19D, Parcel 10).

Willson stated the applicant has requested to continue the hearing.

**Conservation Commission Meeting April 24, 2019
Town Room, Amherst Town Hall**

7:15 PM Notice of Intent (cont'd from 4-10-19 mtg) – Charles Kovacic/Direct Energy Solar for installation of a solar array and associated access roads, utility poles, transformer pad, and fencing within Riverfront, Bordering Land Subject to Flooding, and buffer zone to Bordering Vegetated Wetlands at 191 West Pomeroy Lane (Map 19D, Parcel 10).

Alex Patterson, ESS Env., presented minor revisions to application since last meeting including BLSF impact calculations and methodology, and details on NHESP process. Commission discussed special conditions for the project.

Conditions include:

1. Meet all requirements of NHESP including applying for a Conservation & Management Permit.
2. Meet all requirements of the bridge evaluation report.
3. Hire an erosion control monitor.
4. 1st 100' of Riverfront in turtle habitat restoration area be re-forested, planted with trees/shrubs
5. There must be invasive management in restoration area
6. Wetland Administrator to work with applicant on acceptable seed mix for solar arrays.

Butler moved and Clark seconded. Commission VOTED (4-0-1, Fair abstained) to close the public hearing and issue the Order of Conditions with Special Conditions as discussed.

